THE CULTIVATOR:

A MONTHLY PUBLICATION, DEVOTED TO AGRICULTURE.

I KNOW OF NO PURSUIT IN WHICH MORE REAL AND IMPORTANT SERVICES CAN BE RENDERED TO ANY COUNTRY, THAN BY IMPROVING ITS AGRICULTURE — *Wash.*

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THE CULTIVATOR.

TO IMPROVE THE SOIL AND THE MIND.

☞ All subscriptions discontinued in February, unless renewed by payment in advance.

☞ **An Advertising Sheet,** ☜

☞ Will accompany our next number. The edition is 20,000 copies, circulating in every state and territory of the Union. Advertisements and notices for the Farmers' Directory, must be forwarded to us before the 20th instant.

☞ **Annual Agricultural Meetings.**

☞ The New-York State Agricultural Society, and the New-York State Agricultural Convention, are both to meet in Albany, on the FIRST TUESDAY IN FEBRUARY next. The Society will meet in the City Hall, at 11 A. M.; the Convention in the Assembly Chamber, at 4 P. M.

It is hoped that every county society, and every county, will be represented at these meetings, either by delegates, or by patriotic individuals. Much, as relates to the improvement of agriculture, and to the substantial interests of the state, may result from these deliberations. Men congregate with alacrity, from remote parts of the state, and at great expense, to compass party or sectarian purposes. Why not display a like zeal when the interests of a whole community are the objects of concerted operation? Surely if there is one business which more than another tends to benefit the entire state, it is the great business of agriculture—it is this which, directly or indirectly, most multiplies the comforts and substantial enjoyments of all classes. Let all, then, cherish this interest, and encourage its improvements.

American Society for the Diffusion of Useful Knowledge.

We know nothing of this society, except what has appeared in its publications. We have not made its proceedings the subject of inquiry, nor have we any personal acquaintance with the gentlemen who appear to manage its concerns. When we saw a list of fifty volumes, professing to be published under its sanction, recommended for the use of common schools, and virtually endorsed by Gov. Marcy and Secretary Dix, as one of the guardians, though self-appointed, of the agricultural community, we examined the list of books recommended, and declared our opinion freely and honestly—that it was *wholly unsuited to form the* BASIS *of a common school library, for an agricultural population.* Reflection has rather strengthened than weakened this opinion. But when we received from an esteemed friend, whose communication we published in our November number, a letter explaining the causes of the omissions of which we complained, with pamphlets detailing the disinterested and benevolent professions of the society, and giving, as officers and members, the names of many of our most distinguished citizens, we felt a confidence, that the objects of the association were truly patriotic and praiseworthy; and that although nothing had been done, in the first series of publications, to diffuse useful knowledge in the great business of agriculture, or other branches of productive labor, yet that something efficient would be done in the coming series. We consequently commended the society to public patronage, and invited our brethren of the type to co-operate in their labors of usefulness.

But since the publication of our last remarks, intimations deeply affecting the character of the association, and tending seriously to impair its usefulness, have reached us from remote parts of the Union—from New-Hampshire and from Kentucky. These intimations are sufficiently explained in the communication which we this day publish from a Concord correspondent, whose name is withheld at his request, though we feel authorized to give it to any one who may feel aggrieved by the facts he alleges. Reports like those stated in this communication are abroad. If they are well founded, they should be known, for we profess to be uncompromisingly hostile to any attempt to deceive the public in matters of such deep interest. If they are not true, the sooner they are met and put down by indubitable testimony, the better; so that whether they be true or false, the accused party has no cause of complaint; because the society should not longer suffer under unjust imputations, if innocent; nor should the public be imposed upon, if the charges be true. We do not deny the right of individuals or associations to speculate in books as well as in merchandize or lands. We ask only that they shall show their true colours.

We consider the course we have adopted in this matter imposed by duty. We shall be ready, nay anxious, to correct any erroneous impressions which these remarks, or those of our correspondent, may create upon the public mind, whenever we can do it with strict regard to truth.

Premium Crops.

We publish to-day three communications which have claims to premiums offered by us for the most profitable crops of corn and ruta baga. Two of these give the culture, product and profit of corn, and the other of the Swede. One of the corn crops gave a product of 118¼ bushels—and an estimated profit of $87.71 per acre; and the other a product of 116 bushels, and an estimated profit of $68.15. The ruta baga yielded at the rate of 1,230 bushels per acre, and an estimated profit of $175.80. We invite the farmer, who by the old slovenly mode of culture, seldom nets as much from five or ten acres, as these spirited farmers have netted from a single acre, to pause, and scan the causes which produce this wonderful difference in the profits of farm labor. We presume 40 bushels is a high estimate for the average produce of an acre of corn. Then three acres of common corn would yield about as much as one acre of first rate. Then what is the difference in the expense of the two? The common crop will cost three times as much as the good crop, because it requires three times the labor to plough, hoe and harvest three acres that it does one acre. The only difference that we can perceive, is in carrying out the manure and spreading it. The good farmer carries it out to feed his corn crop—the bad farmer leaves it to rot and waste in his yard, while his corn is starving for want of it. Estimating the average expense of culture, therefore, at $15 per acre, the one expends $45 for 120 bushels of corn, to say nothing of rent, taxes, &c. and his crop, therefore, costs him at least 37½ cents the bushel.—The other expends $15, exclusive of drawing out and spreading his manure, and gets 118 bushels of corn. His crop costs him about *thirteen* cents the bushel, or about one-thrd as much as his reckless neighbor pays for his. The manure of the bad farmer must ultimately be hauled out or lost; and it is as valuable after having fed the corn, as it would have been if summer yarded. The extra fodder of the good crop, will more than pay for any extra labor that may be required to harvest it.

The modes of culture, &c. of the two crops noticed to-day, it will be seen, were alike in four important particulars:—

1. They were planted on a grass ley.
2. They were heavily manured with unfermented dung.
3. They were managed entirely with the cultivator and hoe, no plough having been employed in dressing the crop.
4. The crop, stocks and corn, was cut up before the grain had ripened.
5. The hills were not earthed.

These are all deviations from the common practice, and the results show, that they are beneficial ones.

The ruta baga crop is also worthy of attention. If an acre of ground, with an expenditure of $30, including manure, can be made to grow 1,230 bushels of ruta baga, 70 lbs. to the bushel, it is certainly an object worthy the consideration of the farmer. If a bushel, or 70 lbs. of ruta baga, is equivalent to 20 lbs. of good hay, for all kinds of neat cattle, the 1,230 bushels, the produce of an acre, would go as far in the economy of feeding, as nearly 20 tons of hay—which we should not ordinarily expect from less than ten acres. But take half or quarter of this estimate, and it shows the crop to be valuable.

The Philosophy of Pruning.

We apprehend that the common practices in this branch of rural labor are not altogether based upon a sound philosophy. The animal structure, we all know, is admirably adapted to its wants, to its habits, and to its uses. There is no surplussage—no useless incumbrance—all is necessary to fulfil the designs of nature. From analogy, as well as from the system and order which every where pervade the visible creation, is it not reasonable to infer, that every part of the vegetable structure is alike essential to its well being? Are not the branches and leaves as essential to the tree, as the limbs and lungs are to the animal? Who will say otherwise? Nature produces nothing in vain. Although we may assist in carrying out her designs, we cannot cross her purposes without suffering the penalty imposed for a violation of her laws.

No part of a plant can be affected without affecting the other parts. Roots and branches reciprocally produce and nourish each other. If a tree has part of its roots destroyed, the branches which these supplied decay; and when some of the branches are destroyed, some of the roots perish also. The extent and form of the one, will in a measure ever correspond with the extent and form of the other. If a young tree is kept close pruned, divested of its limbs and foliage, it is soon stunted in its growth, the wood becomes carious and diseased, and the plant is short-lived. If, therefore, we destroy the equilibrium—which nature has established, between roots and branches, by greatly diminishing the one or the other, we thwart her designs, and mistake our interest. Every branch has its roots—its mouths—in the soil, to supply it with the elements of its food; and every root has its branch and its leaves—its lungs—in the air, to convert these elements into food, for the joint benefit of them both and of the stem. One cannot attain growth without the co-operation of the other. Without the roots the plant cannot obtain the elements of food; without the leaves those elements, if taken into the system, are of no benefit; but, on the contrary, like the undigested food upon the animal stomach, generate disease, rather than promote health and vigor. Every leaf performs its office in the process of nutrition and growth; and, other circumstances being alike, the increase in the growth of the plant, will be in the proportion to the number of healthy leaves: if one half of these be destroyed, the growth will be but one half as great as if the whole had remained—if complete defoliation takes place, the growth will entirely cease. Hence pruning decreases growth, in proportion to the extent or severity with which it is practised.

"Whenever a tree has a live spray cut from it, an injury is inflicted on that tree that can never entirely be repaired. Every wound received is stored up; and if wounds be constantly added, they will accumulate to a degree too great to be borne, and the tree will sink under its infirmities. It is useless to attempt to transfer the timber of the boughs to the stem, or to confine the growth of timber entirely to the stem. However desirable it may be to the pruner, to have all the growth diverted to the increase of the stem, he never will be able to effect it. He may, like the dog, snap at the shadow, and lose the substance; but never will he be able, by pruning off the boughs, to increase the growth of the stem one jot. No; the size of the stem will be in proportion to the head it has to support. The stem is not, as he may imagine, a production formed merely for the use of man; it is the canal, or passage, in which the juices pass between the roots and branches; and the size of this passage is always in proportion to the offices it has to perform. If the number of branches [meaning to include leaves] be increased, the quantity of sap passing between them and the roots will be increased; a greater space is necessary for the increased quantity of sap, and consequently the stem is increased. Let the head of the tree increase, and depend upon it, there will be a corresponding increase of the stem.

"It is said to be right to cut away a small proportion of the weaker branches, and turn the current of the descending sap more abundantly into the stem. It is hard to understand what is meant by this explanation of the effects of pruning. Does the sap descend down the stem till it arrives at the weaker branches, and then

ascend up them and increase their size, instead of that of the stem? If so, the weaker branches would soon become the stronger; or rather if trees have the property of sending the sap from the strong branches to the weaker all the branches would be equally strong. The descending sap, on reaching the weaker branches would become ascending sap. And if the small branches be considered obstructions preventing the descent of the sap, the large branches must be greater obstructions. But where does the sap descend from? Pruners forget, that they cannot cut a live spray from a tree without lessening the quantity of its leaves. Their theory is founded in error, and all their reasoning is false."—*Ballard, in Farm. Mag.*

This explains what often seems enigmatical to superficial observers in vegetable economy, viz. that moderate sized trees from a nursery, have ordinarily a much thriftier and healthier growth, and arrive sooner to a good bearing state, when transplanted, than trees that are very large. In the former, the natural proportion between the roots and the branches is preserved,—the former being taken up nearly entire—the sap vessels are filled, and the growth is but partially retarded. While in taking up very large trees, whose roots have greatly extended, the mouths of the plant are seriously diminished, the sap vessels contract and become indurated, in consequence of the diminished supply of sap—and the tree must acquire new roots, and a new sap-wood, by a slow process of growth, ere it can flourish with its accustomed vigor. The same evil results from cutting off the entire top of a tree. It is deprived of its elaborating organs; and although the root may send up the elements of food, they cannot benefit the plant for want of leaves to convert them into vegetable blood. It is no argument against this position, that deciduous trees spontaneously develop foliage and flowers in the spring. There is a store of elaborated sap laid up in autumn to effect this. Strip a tree in June, when this store is exhausted, entirely of its leaves, and the tree will not grow, and will probably die. The stem, at least, will sustain serious injury. The nurseryman knows, that after an apple, pear or plum stock has been cut down and grafted upon, the heart-wood becomes unsound if the graft fails to grow, and the whole stock dozy and in a manner worthless for a future scion, and that it will not grow a particle above where it sends off succors.

The tendency of pruning to generate dis ase, and to shorten the life of trees, is illustrated in the appearance of old orchards, which have been injudiciously pruned. Wherever a limb is split off by winds or accident, it exposes a diseased heart-wood; and this disease at the heart spreads to the roots and branches, and induces premature death. The natural duration of the apple tree is believed to be more than one hundred years; and yet how few are found in a healthy state at fifty years? Mark the contrast, in soundness of wood, in vigor of growth, and in duration of life, between the apple, and other frequently pruned trees, and those trees, whether fruit or forest, which are left to luxuriate naturally, without the artificial aid of the pruning knife.

If pruning be prejudicial to growth and longevity, why then, we may be asked—why prune at all? We answer, for utility, to give beauty, and to improve and increase the fruit.

In natural forest growth, trees attain height, and a straight clear timber form, from their crowded situation; and as the lower branches become useless they die and fall off. But in cultivated grounds, or where there is ample room for roots and branches to spread, this does not take place; and hence the propriety of pruning here to obtain a good stem for timber, or a handsome top for shade and ornament. Often there are two or more leading shoots striving for the mastery, and unless they are shortened, or taken off, there will be two or more stems, of diminutive size, instead of one stem, of larger size. We may therefore prune shade trees to improve their form, or to please the fancy, and timber trees to improve the bole; but in neither case do we either increase the growth, or prolong the life of the tree.

"As the twig is bent so will the tree incline," is literally true in regard to pruning. We may give almost any form to trees which fancy may conceive, by beginning early, and persevering with the pruning knife or shears, as is witnessed in clipped hedges, and often in ornamental and garden grounds. We may make them dwarfs or standards, or give them a thin or dense foliage, at our pleasure. They may be trained or cut into the shape of animals, into geometrical forms, or architectural or sculptural compositions.

We prune fruit trees to improve the fruit, and to induce a bearing habit. The roots of trees take up from the soil a certain quantity of vegetable food, call it geine, or humus, or organic remains, or what you please—it has constituted parts of vegetable structure, and is convertible, by natural processes, into wood or fruit, or both. If the tendency of the plant is to wood, as is generally the case with all healthy young trees, the fruit will be sparce and inferior, at least till the tree has attained to mature size. On the other hand, if the tendency to growth is checked, by poverty of soil, disease, or judicious pruning, the tree will be brought into a precocious state of bearing, and, in the case of judicious pruning, produce more and better fruit.

In pruning or training to induce a fruit-bearing habit, the object is to check the uninterrupted, and we may say natural, descent of the elaborated sap to the root, by encouraging a horizontal, instead of an upright, growth of the branches, when the tree approaches the bearing age. This causes a stricture in the descending sap vessels, at the bifurcation, or junction of the branches with the stem, and a consequent accumulation of elaborated sap in the branches, to generate fruit buds, and to swell the fruit, The same object is sometimes, though injudiciously, effected, by taking out a narrow circle of bark, or by ligatures, to prevent the descent of the elaborated sap. Hence the upright shoot is often cut out, particularly in the apple tree, and the branches are trained horizontally, diagonally, or in a half inverted position, as on walls, espaliers, and in the *en queneille*, or distaff form of training. These operations have also a tendency to improve the quality of the fruit, by giving it a better exposure to the kind of influences of the sun, air and light, all essential to its due maturity and high flavor. Nature provides for the propagation of the species, by producing perfect seed, leaving to art the labor and contrivance of enlarging and enriching the pulp or fruit. All fruits may be improved from their natural state, by artificial culture, though nothing may be added thereby to the intrinsic value of the seed, or natural duration of the tree. The seeds of the wild crab, or wild pear, are as good to sow for stocks, to graft or bud upon, as the seeds of the cultivated varieties of these fruits; and indeed, according to Dr. Van Mons' theory, which his practice seems to have confirmed, they are the best from which to start new varieties.

Prune, therefore, when necessary, to improve timber; prune for ornament; prune to improve the fruit: but do not prune in the hope of accelerating growth or of prolonging life. And in all your prunings, cut while the wood is small, and spare to the tree all the foliage you can consistent with the object you have in view. By pruning when the tree is young, and pruning often, we may secure a handsome stem and well formed head, and we cause no wounds that do not speedily heal.

The common practice is, to prune in autumn or spring, when the tree is divested of foliage. To this practice we make two objections. In the first place the wounds are exposed—unless covered with a suitable composition—to the searching and corroding influence of the sun, wind and rain, there being no leaves to shield, nor circulating pulp to heal them. In the second place, it causes the multiplication of succors, and often increases the evil which it is designed to cure. The sap is arrested in the spring, when its flow is greatest, in its natural course to the amputated branches, oozes out and corrodes the bark and wood, or exhausts itself in the production of a prolific growth of succors, more detrimental than the parts that have been lopped off. If pruning is performed the last of June, when the exuberant flow of sap has abated, the wounds are in a measure protected, by the foliage, from the weather; much unelaborated has become elaborated sap, and transformed into cambium, or pulp, whose healing qualities soon cover the edges of the wound; few or no succors are generated, and the heart of the tree is in a measure preserved from canker and decay. These opinions, as to the propriety of summer pruning fruit trees, have been confirmed, in our mind, by three years' practice and observation.

Another common error in pruning, is the practice of cutting all the lateral shoots from a young tree, except a few at the apex; and to cut young, vigorous wood from the tops of old trees, leaving long extended naked branches, which are often broken by the winds. In the first case, we obtain long spindling stems, incapable of supporting, when transplanted to an open situation, a respectable top. The same evil occurs in the nursery, or the forest, when the young trees stand in a crowded position. In the second case, we produce unsightly and comparatively unproductive tops. Since the offices and importance of leaves in vegetable economy have been better understood, a manifest improvement in pruning has succeeded. It is now contended, and we think upon correct principles, that none, or but very few, of the lateral branches should be cut entirely from young trees, until the tree is tall enough to form a head; but that the pruner should be content with shortening those which interfere with the main stem, and such as are of unreasonable length. By this means, we obtain a tapering, and straight stem, and retain the aid of a large portion of the leaves towards its enlargement. Every leaf contributes to the growth of the stem below the point of connexion. When the tree has attained a proper height to form the top, it is advisable, particularly with the apple, to cut out the upright shoot, leaving three, or at most four, laterals, or branches, upon different sides, to form the top. If a little attention is given annually to cutting out the small limbs, which are likely to cross or interfere with each other, the necessity of cutting off large branches will for a long time be superseded. In old trees, the old branches frequently become cankered and diseased, and young thrifty wood is thrown out at or near their base. In this case it is always preferable to cut the diseased wood, leaving the healthy shoots to fill their places. When transplanting trees, the knife should be used sparingly. If the roots are greatly diminished, in digging up the tree, the top may be lightened by thinning its branches; or if none of these can be spared without marring the form, the longer branches may be shortened, or cut in, at a bud; but we do not advise, in any case, the cutting off the entire top.

New Grains.

We have noticed in a cotemporary print, some remarks tending to discourage a prevailing propensity in our farmers, to obtain new varieties of grain. This propensity, like that for the morus multicaulis, may be carried, it is true, to a ridiculous extravagance; and although new kinds may often prove worthless, in particular locations, or in general, yet the benefits which actually result to the community, from the introduction of new varieties of grain, are palpably great, and counterbalance all the losses that accrue from ignorance of the soil or climate to which they may be peculiarly adapted. All endeavors to perpetuate the good qualities of a breed of animals, by breeding wholly from the same family, termed breeding in-and-in, have entirely failed. Even the notable example of Bakewell does not seem to form an exception to this remark: for though he succeeded for a time, his stock rapidly degenerated after his decease, unless where it was crossed with another breed. Varieties of fruits have their natural limits of extension, beyond which, we believe, human art cannot render them prolific and healthy. Why should not varieties of grain and roots be subject to the same laws which go to deteriorate animals and fruits? That they do, is evidenced by the facts, that most of the varieties which were in estimation forty years ago, have disappeared from among us, and have been replaced by those which are comparatively new. This remark will apply particularly to our potatoes and Indian corn, and in a great extent to our wheat. By change of soil and climate, the vigor of a variety may have been prolonged; but we doubt whether any variety has been cultivated forty years in the same place, without showing unequivocal evidence of deterioration and diminution of product.

We beg the reader to observe the distinction we make between species and varieties. The better to illustrate the matter to the young reader, we may state, that under the Linnæan system, plants are divided into classes, orders, genera and species. Thus wheat (Triticum) is a genus of plants, belonging to the third class (*Triandria*) and second order (*Dygenia*) to which Loudon assigns 16 species, viz. summer wheat, Lammas, Egyptian, turged, Polish, spelt, one-grained, porcupine, rushy, couch grass, bearded, rigid, crested, maize-like and long-spiked. All other wheats are mere varieties, produced, naturally or artificially, by a cross of two species, and modified, more or less, by soil and climate. It is the varieties which deteriorate, as we alledge. Varieties are multiplied wherever two species, or two varieties, are grown contiguous to each other—the pollen of one kind coming in contact with the pistil of another, invariably producing a progeny partaking of the qualities of both parents, and yet not wholly like either. Hence the strange mixture in our wheat fields, some heads ripening earlier and some later. The continued cultivation of a single variety is precisely like breeding in-and-in with a family of animals. It will deteriorate.

We will cite another illustration. Indian corn (*Zea*) belongs to the twentieth class (*Monœcia*) and third order (*Triandria*) of Linnæus. Loudon gives but two species, the common and Valparaiso cross corn; while other botanists give three or more—so that all our cultivated sorts of this grain are but varieties of probably the same species; and these varieties are continually multiplied in the way we have mentioned. When we see white kernels upon the stock of a yellow kerneled variety, caused by the impregnation of the silk by the pollen from a white kerneled stock, these white kernels are not like the white kerneled or male parent, as their appearance indicates, but they are a new variety, partaking of the quality of both parents; and if planted, this will be apparent in the progeny or product.

From the foregoing considerations—and from the well known fact, that most of the estimable varieties of grain now cultivated, are comparatively new, and have been produced from small beginnings, perhaps from a single head or stool, selected by some

observing farmer or naturalist, and carefully propagated—we are decidedly of opinion, that the introduction of new varieties from abroad, and the dissemination of such as may be found deserving of notice in our country, is eminently calculated to promo e the interests of agriculture, and of the community at large.

Another consideration. The prices at which these new products are held, is objected to, as savoring of extortion. In the first place, no one is obliged to buy. It is his voluntary act, and *he* should not complain; nor does he complain when he becomes a seller. In the second place, the only way to disseminate rapidly any thing which is intrinsically good, is to demand a high price for it. It will be prized and nurtured in proportion to its cost. In these matters we are apt to graduate value by the cost. We once tendered to the members of an agricultural society, a bag of choice seed, in such portions as they might choose to take, as a gratuity; and although it stood before them, and they examined and professed to admire it, not an individual took a particle. We took it home, demanded a high price, and sold it readily in a few days.

We began this article simply with the intention of acknowledging the receipt of some beautful samples of wheat, and of returning our thanks to the gentlemen who sent them to us.

We have received from Geo. C. Thorburn samples, in straw and in grain, of the *Whitington Wheat*. It is the handsomest sample of wheat we ever saw, of any kind, although it is a spring wheat. The berry is large, plump and very white, the skin apparently thin, the head seven inches long, the straw stout and bright. Mr. Thorburn will have seed to sell in March.

We find by the (London) Farmer's Magazine of October, that the origin of this wheat was three ears selected from a field, on the mountains of Switzerland, and that it obtained a medal at the Liverpool agricultural meeting in 1836. It is also stated, in an advertisement by the way, that it grows upon poor soils, that 12 bushels sown have produced 300—and that the grower charges £8 per quarter, equal to $4.44 the bushel.

The same number of the Magazine advertises other new varieties of wheat, which are highly extolled, and which have the like recommendation of high prices, to wit, 8 guineas the quarter of 8 bushels, or 25s. sterl. equal to $5.55, the bushel. Of these we give the names of Donna Maria, Fullard's prize wheat, or four square headed red Brittania, said to have originated from a single ear grown on the field of Waterloo, and to which was awarded the London gold prize medal. Brown's Chevalier prolific ten rowed white wheat, comes recommended by a great number of certificates of growers. This is said to produce—five pecks (about half the common seeding in England) being sown to the acre—forty-two to sixty bushels the acre. And it will be seen in the extracts we make in regard to the Yorkshire cattle show, that the Royal Standard wheat, which we take to be identical with the Whitington, is in high repute. Bating the puffing and humbuggery connected with these advertisements, and the London folks are adroit in these matters, there is no doubt, that all the above named are new and valuable varieties of wheat, which would be an accession to some districts of our country.

We have also received two beautiful samples of wheat, purporting to come from Marseilles, in France, and accompanied by a note signed W. H. Culver. One sample closely resembles the Whitington, though a shade or two darker; the other, said not to have been before imported, resembles the Italian, only that it is larger and plumper than the Italian. Both samples have the size and plumpness of the best winter wheat, though they are said to be spring varieties. They promise to become an acquisition to our husbandry.

New-York Agricultural School.

The following Circular has been addressed, personally, to a few individuals residing in different parts of the state. Relating to a matter that concerns all classes—and as many, with whom we are not personally acquainted, may feel a hearty desire to aid in this great work of industrial, mental and moral improvement—it is here addressed to the public at large—to every individual whose liberal feelings and public spirit may incline to our aid. Subscribers will undoubtedly be entitled to a preference in the advantages to be afforded by the school.

CIRCULAR.

"*Albany, November* 15, 1838.

"Sir.—In 1836, the legislature of New-York passed 'An act to incorporate the New-York State Agricultural School,' with a capital of $100,000, and liberty to increase it to $200,000—'for the purposes of instruction in literature and science, and improvement in scientific and practical agriculture and the mechanic arts.'

"The prominent provisions in the act of incorporation are—that the concerns of the company shall be managed by a board of trustees, to be annually chosen by the stockholders, of which board the Governor and Lieutenant-Governor, for the time being, shall always be members;—that the trustees 'shall purchase a farm of about five hundred acres of land, either contiguous to or near the Hudson river, and nigh to the city of Albany as shall be convenient,' and make necessary arrangements for commencing and carrying on the school. And, that the stock shall not become a matter of speculation, to the detriment of the institution—and to prevent a perversion of the school to other than its legitimate objects, the law limits the dividends upon the stock paid in, to five per cent per annum—and declares, that 'the professors, teachers and pupils of the school shall, unless prevented by sickness, or other unavoidable cause, occupy themselves at least one-half of the time the said school is in session, between the months of March and December, either in the practical agricultural business of the farm, or in the laboratory or mechanic shops connected with said school'

"In consequence of the indisposition of one of the commissioners appointed to open books of subscription, and the death of a principal patron and manager, only about one-third of the capital stock was subscribed; the corporation was not organized, and the charter became void by non-user. At the last session of the legislature, the act of incorporation was renewed and continued in force. But the deranged state of the business concerns of the country, and the general pressure for money, has hitherto prevented any efforts being made to fill up the subscription As our commercial embarrassments have in a great measure subsided; and impressed, as we are, with a confident belief, that the projected school is calculated essentially to accelerate improvements in the great branches of productive labor, and to exert a benign influence upon society at large, we beg leave respectfully to call the public attention to the subject, with the view of carrying the provisions of the law into speedy operation.

"The law makes no appeal, it is true, to mercenary considerations; but it appeals to higher, nobler feelings—to the public spirit, to the patriotism of our citizens. Its object is to improve the moral and social condition of the state, and to augment the productions of its soil. It is designed to extend to productive labor the efficient aid of modern science, and to instruct it in what experience has taught and confirmed as the best modes of practice; and to elevate, withal, the intellectual and moral character of that numerous class of our population, who are, emphatically, the shield and strength of our freedom, to that healthful and independent condition which the safety of our country demands.

"It is unnecessary for us to dilate upon the numerous benefits which scientific and industrial schools are calculated to confer upon a community. Their great utility has been amply demonstrated in Europe, where they have been long established, and where they continue annually to increase. They seem particularly fitted for a free people, who are entrusted with the sovereign power, and who ever, while free, give the impress to national character. Should the projected school realize any thing like the benefits anticipated from it by its friends, it will become a pattern, and lead to the establishment of like institutions in our land, and to a highly salutary improvement in our industrial and social habits.

"The particular object of this circular is to apprize you of the foregoing facts, and to invite you, as a willing promoter of the public good, to take an active interest in the projected school—to subscribe to the stock yourself, and to influence the wealthy and philanthropic of your neighborhood to do the like. The shares are twenty-five dollars each. It is proposed, that when $50,000 of stock shall have been subscribed, notice shall be given in the Cultivator, Genesee Farmer, and the Albany Argus, of a meeting of the stockholders, at the Capitol in the city of Albany, to organize the Association, and at which time a payment of five dollars on each share of the stock subscribed will be required to be paid. Will you do us the favor to send your reply, before the 1st of February, addressed to Archibald McIntyre, Esq. or Jesse Buel, Albany, with a notice of any subscription you may be disposed to make, or may have been able to obtain, to the stock of 'The New-York State Agricultural School.'

"ARCH'D McINTYRE,
"J. BUEL,
"J. P. BEEKMAN."
*W. H. SEWARD,
*W. L. MARCY.

* We received permission to add these two highly respectable names to the Circular after it had been sent abroad.

Insect Enemies.

At the recent meeting of the "British Association for the advancement of Science," the Rev. F. W. Hope read a paper "On Noxious Insects occurring in the year 1838, more particularly the *Tipula tritici* of Kirby."

The author commenced his observations on the *apple blight*. In this year apple trees have chiefly suffered from the attacks of two insects; one is a beetle (*Anthonomus pomonus*,) which attacks the blossoms in bud, and prevents the fruit from what is called "setting." It is well known to entomologists, and the author hopes shortly to give its history to the world with illustrations. The second is the *Aphis*, or plant louse, which is this year exceedingly abundant. The apple, the hop, and the wheat, have suffered from it. The author would not describe these insects, as they are so well known, but made the following observations:—When vegetation in spring has made considerable advances, and the weather becomes wet and uncongenial, then *Aphides* appear in greatest abundance. He attributes the great abundance of *Aphides* this year to the cold. He was anxious to ascertain if *Aphides* are more abundant in some soils than others, and solicited information on this point. In 1829, the *Aphides* were succeeded by the *Coccinelidæ*: is this usual? The *Aphides* on the wheat this year are more abundant on the spring than the autumn sown wheat, and (near Cheltenham) more numerous on bearded wheat. *Tipula tritici* is observed to be abundant in some districts. The *pupa* and *chrysalides* are not so numerous as in former years, but the caterpillars are very abundant; but the wheat appears more damaged by Aphides than Tipulæ. The author then alluded to the kind of information wanted in these inquiries, with regard to soil, atmosphere, cultivation, and varieties of wheat, which might be supplied by the agriculturist; and regretted that there was not an agricultural section in the Association. He then hoped botanists would supply information:—1. On the species and varieties of wheat grown in this country: 2. Diseases of wheat arising from parasitic fungi and other causes: 3. The provincial and local names of the kinds of wheat. In conclusion, he suggested that a committee of the British Association, consisting of botanists, entomologists, and agriculturists, should be formed, in order to investigate the diseases incident to wheat, and other kinds of agricultural produce.

New Discovery in Philosophy.

Professor Mitchell, of Philadelphia, has succeeded in preparing an apparatus for pressing gases into a liquid and solid state. The discovery of a mode of converting gases into liquids, by compression, was first made some time ago, by M. Thilloms, of Paris. The apparatus of Prof. Mitchell is made to produce a pressure upon carbonic acid gas, of about 1,000 lbs. to the square inch, which by expelling the latent caloric, reduces the gas to a liquid, and of course creates great heat, externally, by the caloric which is thus expelled and set free. On suffering the vessel containing the liquified gas to communicate with the air, a part of the liquid is rapidly evaporated, and the rest frozen into snow, light, dry and very cold to the touch, beautifully white; and when first exposed to the atmosphere, is 122 degrees below the cold of frozen water. As rapid evaporation immediately ensues, visible in the appearance of a white vapor, and carrying off caloric, this low temperature rapidly falls to 130 or 140 degrees below zero. Mercury, which freezes at 140° below zero, becomes solid, in a few seconds, when enveloped in this snow, has the hardness of lead, and exhibits the same appearance when cut with the knife. Thus it seems, that without the all-animating principle of caloric, which exists, either in a latent or free state, in every thing, all gases and liquids would become solids, and every organized being, animal and vegetable, would cease to exist. How wonderful are the works of the creation!

This discovery promises to become of great use in science, in the arts, and even for domestic purposes. Prof. Mitchell is engaged in a course of experiments, with his apparatus, the results of which will be made public through the Journal of the Franklin Institute.

The Farmer's Garden.

KITCHEN DEPARTMENT—(*Continued.*)

25. Hop.—Hops are deemed indispensable, with many good housewives, in the making of yeast, or beer, or both. A few roots, planted on the outer border of the garden, will require little other care than polling and picking them, and from six to ten poles will supply the wants of the family.

26. Horse-radish.—This is a valuable and wholesome condiment, or sauce, with meats. It grows from cuttings of the root, as well as from tops. To have fine roots, it should be planted deep, in rich mellow ground, and stand two years. For winter use, it may be taken up in the fall, and packed in the cellar in earth, like other roots. A few feet of ground will suffice for its culture, and to this it should be confined.

27. Hysop is a sort of shrub, the flower spikes of which are used, fresh or dried, for medicinal purposes. Half a dozen plants on a border will suffice.

28. Lettuce is common in our gardens, and constitutes the principal sallad for our tables. There are a great many varieties, and there is a material difference in their quality. To have fine heads, it is necessary to sow in September, to protect the plants in winter, and transplant in May. The curled Siberian is in general esteem. If sown in a hot bed, and carefully transplanted, about the first of May, into a rich east or west border, the coss and some other

kinds will make tolerable heads, and be excellent.—The leaves may be gathered and tied, as directed for endive, with great advantage to their quality. Lettuce may be sown very early, and small sowings may be made, at intervals, till midsummer.

29. Marjoram.—There is an annual and a perennial—the latter generally cultivated here, as a sweet herb. It should be sown early, cut before it is out of bloom, and hung up in little bundles to dry for winter use.

30. Melons.—In northern latitudes we recommend the treatment, both for water and muskmelons, which we suggested for early cucumbers; that is, burying under each hill a half barrow full or more of hot dung. The melon is sensitive to cold and to moisture—the hot dung imparts heat and induces dryness. If the melons can have the benefit of boxes, covered with glass, through June, these will greatly facilitate their growth, as well as protect them from the striped bug. Our boxes, which have been several years in use, are 18 inches square, six inches deep in rear, and four in front, and are covered with a moveable sash, containing six 6 by 8 panes of glass. Both the water and muskmelon like a sandy dry soil. The hills should be planted six feet apart at least, and not more than four plants should be left to grow in a hill. The old species of muskmelon are far inferior to many new varieties, as the citron, pine apple, cantaloupe, &c. When you get a good kind, save your own seed, and plant no other variety with it.

31. Mint.—The spearmint is often used in seasonings and salads—the peppermint for distillation and medical purposes. A few roots of each are desirable in the garden.

32. Mustard.—The leaves of the white kind are used in salads with pepper grass. The black seeded is used for greens, and is cultivated for the seed, to be manufactured for table use. When intended for seed, it should be sown in rows, two feet apart, early in the spring, and the plants thinned to four or five inches apart. It will ripen in July. Every farmer may raise his own mustard for the table, and manufacture it too; and though not so comely in appearance, it will prove, in eating, much superior to much that is imported from Europe. We have seen it powdered by rolling a junk bottle over it upon a polished stone or hard board. But we have manufacturers who pay a liberal price for the seed, particularly in our cities.

33. Nasturtium.—This is an annual, with a handsome flower, whose berries, preserved in vinegar, are an excellent substitute for West-India caper sauce. Sow early in May. The vines may be supported by brush laid upon the ground.

34. Onion.—This is a vegetable that every farmer can raise, and should raise. It serves many purposes in kitchen economy, and is healthful, and generally grateful to the palate. The onion is sown here about the 25th April, in drills one foot apart, the ground being rich and well pulverized. The plants are ordinarily thinned to the distance of three or four inches; though if two to four are left together, they often bottom well, and grow to a sufficient size. The tree or top onion, may be planted in September; a slight covering of straw will protect it during winter, and it then comes into early eating in the spring. The common sorts are also sown and preserved through the winter in this way. Some people break down the tops in July, to increase the bottoms. This practice may facilitate the maturity of the crop, though it does not increase it. The best way we know of, of preserving onions for family use, is, after they have been pulled and dried upon the ground, to take a stick, of two inches in diameter, six to ten feet long, split it through the centre into two or four parts, to within one foot of the but; then to begin at the bottom and draw the tops of the onions through the slits, letting them close as you progress, till you have reached the top, when the whole is made fast with a stout cord. In this way the onions are kept dry, and will not grow, and occupy but a small space. The onion gives from two to five hundred bushels the acre, and we have known the product greatly to exceed the latter. Some tread the ground, after the seed is planted, and then give it a slight raking, to render it smooth and even. The crop should be drawn when the collar, or lower part of the stem, shrivels and dries. They should be thoroughly dried, before they are housed for winter.—Sometimes the onion is planted in hills, four or five seeds being dropped in each hills, with intervals of five or six inches between them, and in this way they often do well. Another mode of raising the onion, and we believe it the prevailing one in the middle and southern states, is to sow in June, in drills six inches apart, and thick. They will form small bottoms, about the size of a filbert, the first season. They are then planted out the following spring for a crop.

35. Parsley.—This seeds the second year, and is therefore a biennial. Sow in drills at eight inches, in May, or later. A bed four feet square will supply a family. To have it for use in winter, it may be sown in any vessel filled with earth, and kept in the kitchen.

36. Parsnip.—This root requires the same cultivation and tillage as the carrot. It should be gathered late, as it continues to improve in flavor even till spring, till which time the main crop is permitted generally to stand in the ground, unless wanted for winter market or use. When put in the cellar in autumn, the roots, like those of the carrot and beet, should be covered with earth.

37. Pea.—This is a favorite with almost every one, and every one may enjoy it, who has a garden, with but little labor. The first crop may be sown as soon as the frost is out of the ground, and the surface sufficiently dry, and the sowings may be continued at intervals to the first of August. The early sorts, most cultivated, are the June, early Charlton, Bishop's dwarf, &c.; the later ones, marrowfats, Knights, &c. &c. Plant in double drills one foot apart, with intervals between the double drills of two to four feet, according to the growth of the pea.

38. Potato.—For early use, a few hills may be planted in the garden; and these should be of an early variety. The tubers or sets may be mixed with earth in a vessel, and set in the kitchen, or slightly covered in a hot-bed, and afterwards planted; and this will cultiate their maturity.

39. Potato, (sweet,) may be raised here in favorable seasons; though they seldom acquire the rich flavor that distinguishes them at the south. To cultivate them here, make a bed of hot dung in May, of one to two feet thick, and a yard square, cover the dung with four or five inches of good mould, on which lay the seed, and cover it with as much more earth. The heat of the dung will soon cause the potato to grow, and when the plants are of the size of cabbage plants, they may be drawn, and planted out with the dibble like cabbages, in hills four feet apart, or the plants eight inches apart in ridges. The soil should be sandy and dry, and the earth should be gathered into cones or ridges, as for melons. The quality of these potatoes is improved, by exposing them some days after they are dug, to the ameliorating influence of the sun's rays. They can not be well preserved long in this latitude.

40. Purslane, a vexatious weed, which Cobbett says Frenchmen and pigs eat raw, when they can get nothing else. It however makes a very good pot green, when boiled.

41. Radish—several varieties. Sow very early, and at intervals, in drills eight inches apart, and thin to two or three inches between the plants. The early purple top and turnip rooted succeed best for early crops. The black Spanish may be sown in July with fall turnips, and used through the winter and spring.

42. Rhubarb.—This is an excellent article, and should be in every garden. It is perennial, and resembles the burdock much in its growth. The stock of the leaf, which is large and tender, is in high esteem for tarts and pies, and in this way the plant is believed to be highly conducive to health. Peel the stocks, cut them into half inch length, and put them into tarts, pies or puddings, just as you would green gooseberries or currants. Give the plants two square feet each, in good ground, and a dozen of them will supply a family from May to August. The rhubarb may be propagated by offsetts, or from seed, which ripens at midsummer, and may be sown as soon as gathered. There are several varieties. This is getting into great demand as a market vegetable. The seed stocks should be cut in, except one or more left to produce seed.

43. Rue is a handsome little shrub, of occasional use in the family. Two or three plants are enough.

44. Sage, is much employed in seasonings and stuffings, and is sometimes used for tea. It is propagated by seed and by slips. Sow in May, in drills, and transplant the second year, leaving intervals of eight to twelve inches between the plants. Cut the tops before they come into bloom, and dry for winter use.

45. Salsafy, or vegetable oyster, very much resembles the parsnip, in its root, in its hardiness, its culture, and in its properties and manner of cooking for the table. Enough should be gathered in autumn for winter use.

46. Spinach.—There are two kinds, both excellent pot-herbs, one of which should be sown early in September, for early spring use; and the other early in the spring. Sow either broadcast, or in drills, and cover the bed of the winter sort, in November, slightly, with straw or coarse litter, and keep it on till the breaking up of frost, when you may begin to use the crop.

47. Squash.—There are many varieties, both for summer and winter use; and they are continually multiplying by cross impregnation. For summer varieties, those termed bush, which do not send out vines, are to be preferred. The best winter varieties, for garden culture, are the crook-neck, Valparaiso, under most of its modifications, and vegetable marrow. The only caution necessary in the culture of squashes is, that the hills be at least six feet apart, and that but two plants of the winter varieties be left to grow in a hill. To preserve the squash in winter, give it a cool, and particularly a dry berth, where it will be protected from the frost.

48. Tansy.—A perennial medicinal herb, worth having. A single root will soon generate a supply.

46. Tomato.—There has been, of late, so much said in commendation of this vegetable, as promotive of health, that *we* need not recommend its culture. It is a grateful and healthy vegetable, in many ways, to those who become accustomed to its use. To have it in season, during the summer heats, the seed should be sown in a hot-bed, like cabbages, from which the plants may be transferred when the season will admit of it. They are an excellent ingredient in soups, make a good catsup, stewed in their own liquor they are a fine sauce with meats; they may be dried or pickled; and they are made the basis of a medicine, which, if we are to credit the declarations of the venders, is an infallible cure for most all sorts of diseases which man is heir to.

50. Turnip.—None but the early sorts are usually cultivated in the garden, and these seldom escape the depredations of the fly, either in the top or root. They may be sown very early, and at all subsequent periods, before the first of August; yet those designed for winter use, and for farm stock, are generally cultivated upon the farm.

51. Wormwood is an herb purely medicinal; yet as almost every family has an occasional use for it, no one should be without a root or two of it in his garden.

We have thus given the names of fifty vegetables, exclusive of what are termed fruits, which may be usefully cultivated in the farmer's garden, and which are all valuable as articles of diet, as wholesome condiments, or for their medicinal properties—and which require no great skill in their culture. Each man can select from the list such as suit his taste, his wants, or his garden grounds. We know it will be objected by some, that the care of the garden requires too great an expense of labor, and that it will not repay, in its products, for its cost. In reply to this objection we would remark, that the master, and the unproductive inmates of the family, may perform most of the labor, and find in it a recreation, when they are not engaged in more useful employments; that there are always intervals, in the business of the farm, when farm laborers may be profitably employed in the garden; that, when a market is contiguous, for the sale of its surplus products, garden culture has been found to be the most profitable of any description of rural labor; and finally, that every man may limit his garden to the space which he is conscious he can cultivate to advantage. We toil for wealth, not to carry it with us to another world, but to purchase and enjoy the comforts and rational indulgencies which belong to this. Let us then act accordingly, and avail ourselves of those blessings which a kind Providence has placed at our hands, for our benefit and use.

We shall next treat of the ornamental department of the garden.

New Mode of applying Lime.

We observe, in the Farmers' Cabinet, a communication from E. Tatnall, describing the mode in which he had successfully applied lime to his corn crop. He applies it with manure, and yet so as that the dung and lime do not come in contact. His practice is to apply, late in the fall, 25 ox-cart loads of manure to the acre, spread it evenly, plough the ground, and harrow it well, in the fall. In the spring following, he applies 60 bushels of lime to the acre, and again harrows until the ground is in good order for planting. In the culture of the corn, he takes care not to disturb the manure buried by the plough, preferring that it should decompose without exposure to the sun and rain. After the corn is taken off, he ploughs deep, so as to mix the manure with the earth, sows broadcast, and harrows in wheat. In this way he raises 60 to 70 bushels of corn, and 25 to 30 bushels of wheat, upon an ordinary soil. By ploughing for corn in the fall, Mr. T. thinks he destroys the cut-worm, as he is never troubled with it. We think it more likely that the worm is destroyed by the caustic lime which is applied in the spring.

Whether the lime contributes to increase the corn crop or not, we have some doubt; though as a carbonate, we have no doubt it improves the mechanical texture of the soil, and benefits the wheat. The dressing of manure is a heavy one, and should of itself, in our mode of planting, and if unfermented, give the crop of corn obtained by Mr. Tatnall. The manure had, however, been probably fermented, and the distance of planting, in Pennsylvania, is greater than it is with us. The mode of applying the lime, to the same crop, and yet not coming in contact with the manure, we think a decided improvement.

The utility of lime was, however, strikingly shown in another experiment of Mr. Tatnall. He applied

it, in different proportions, from 60 to 100 bushels the acre, to eleven acres of very poor land, without any manure, and sowed with oats. The crop was unusually heavy; and best where the most lime was applied.

Tropical Plant Company.

Dr. H. Perrine, who was formerly American Consul at Campeachy, has been for some years assiduously engaged, and has spent much time and money, in forming an establishment near Cape Florida, for the introduction and propagation of tropical plants, the culture of which promises important national, as well as individual, advantages. The government of Florida, has passed an act to incorporate the Tropical Plant Company; and Congress has made an appropriation of a township of land to Doctor Perrine and his associates, on certain conditions, to aid in promoting the object of the association. The Doctor has already a large collection of plants at Indian Key, contiguous to the coast, is about removing thither with his family, and now invites emigrants to join him, and capitalists to embark in the enterprise.—We subjoin Dr. Perrine's note,

"TO THE FRIENDS OF THE ENTERPRISE.

"The principal objects of the company, are to form a nursery of supply and a model of cultivation of the valuable plants of the tropics.

"As however, while Indian hostilities continue, it will be impossible to pursue with safety their intended labors on the main land, of tropical Florida, the trustees will delay the organization of the company, and will apply their personal resources to the formation of a preparatory nursery at Indian Key, and the adjacent inlets. The superintendant Dr. Perrine, will hence reside with his family at Indian Key, until the cessation of the Seminole war, where he will continue to accumulate all the seeds, plants, and other elements for the permanent nursery, to be then established on the southern coast of the Peninsula. During this important interval, the most *essential aid* to these preparatory labors may be *immediately afforded* by very *easy means* in the power of many philanthropic friends of this patriotic enterprise,

"1st. By transmitting to Indian Key, at least two seeds or cuttings, &c. of every superior variety of every valuable vegetable which the possessor may consider adapted to the climate and soils of tropical Florida.

"2. By transmitting a detailed list of all books which the owner may deem necessary to enter into a Botanical and Vegecultural Library, especially adapted to the tropical climate and productions of south Florida.

"3. By transmitting a letter containing the desires of the writer in respect to the purchase of one or more shares of stock, in the Tropical Plant Company.

"The trustees do not expect to receive any articles or services without returning an ample equivalent. All letters should be addressed to Charles Howe, postmaster, at Indian Key, south Florida, the financial trustee. All packages of seeds, &c. not exceeding two ounces, should be directed to the Patent office at Washington, whence they will be forwarded to Indian Key. The proprietors of green houses, &c. will render themselves especial services by sending their respective mites during the ensuing six months.

"Even the druggists may contribute the valuable seeds, occasionally found among their tropical medicines. The trustees are James Webb, Judge of the district at Key West; Charles Howe, Inspector of the port at Indian Key; and Doctor H. Perrine, late American Consul at Campeachy.

"*New-York, October 15th*, 1838."

The Robinson Fund.

We are happy of the opportunity of being authorized to add $20 to this fund, designed to be awarded in premiums for certain agricultural books—by Prof. F. H. Gordon, of Clinton College, Ten.—for whose communication, inserted in another column, we bespeak an attentive perusal. Whose name shall we add next?

The American Institute,

Held its eleventh anniversary in October. The articles exhibited exceeded in number, variety and excellence, those shown at any former exhibition.—The receipts for admission were greater, by $2000, than those taken at the last fair. Two hundred medals were awarded as prizes, exclusive of several hundred honorary diplomas—a list of the prize articles, and the names of their owners, together with the very able address of Mr. Davis, of Massachusetts, delivered during the fair, are given at large in the Journal of the Institute, a monthly publication which we again recommend to the patronage of the American public, and particularly to the mechanic and manufacturer. The permanency of the Institute is now put beyond doubt, and the benefits which it is conferring on the country are palpable and wonderful.

We subjoin two extracts from the excellent address of Mr. Davis—one giving a happy illustration of the dependance of agriculture, manufactures and commerce upon each other; and the other pointing to the advantages which result from the diffusion of useful knowledge—of moral and intellectual culture. The address does great credit to Mr. Davis and to his country—and evinces in him talents of a high order, and sound American principles. It cannot be read without interest and profit by any one who has the good of his country—of his *whole* country—at heart.

EXTRACTS.

"We have lived in vain, if we have not discovered that the arts and commerce must unite with agriculture to supply the necessary demands of civilized society. It is but the natural division into which labor arranges itself, to feed and clothe us.

"The agriculturist produces from the earth—the manufacturer converts productions into forms fit for use, and the commercial class distribute the commodities of producers where they are required for consumption.

"If Divine Providence had supplied necessities in such a manner as not to require labor, we might dispense with it; or if the earth produced in a form suited to our use, we should only be under the necessity of cultivating, and might abandon manufacturing; and if it yielded the same productions at all places, we might abandon commerce. But we must till the earth or starve; convert the cotton, the wool and the flax into cloth, or go naked; dig the ore from the mountains, and convert it into iron, or cease to have tools, and whatever is made with them; and must interchange the products of different climates, or cease to enjoy them.

"This division of labor is so essential to civilized man, that whenever we abandon it we must return to barbarism. For converting wheat into flour, and wool into cloth, is quite as important as growing them."

"A knowledge of the properties of bodies, saves the slow and tedious process of experiment, which often, for the want of such knowledge, leads to dissappointment. If the agriculturist understands the elements of plants and soils, he readily discovers their adaptation, and can supply in soils those deficiencies which often defeat the labor of the unconscious husbandman, or he can give such direction to it as to render it successful. The arts rest upon principles very often but imperfectly understood by the workman; but the better he comprehends them, the more easily he detects and avoids obstacles, and attains to successful results. As a knowledge of the chemical affinities and union of bodies is of the utmost importance to the dyer, the painter, the tanner, the printer, &c. who thereby understands the rationale of his process, so is a knowledge of the mechanical powers no less important to those engaged in the use or construction of works where those powers are employed.

"Our country has been much distinguished for the invention of useful compositions and labor saving machinery; and may it not be chiefly imputed to the fact, that useful knowledge is not only largely diffused among all people, but the avenues to it are open, and most men, who have a taste for it, find no difficulty in indulging in it?

"Moral and intellectual culture is an essential element of free government; and it is difficult to comprehend how its character can be understood, or it can be maintained by the elective franchise, without it.

"In private life it opens new resources, gives a stronger and better directed impulse to our efforts, and fills the mind with higher, more just, and confident hopes of success.

"But above all, it brings us out of darkness into light—elevates us from slavery to freedom—transfers our tastes and pursuits from the arts of violence to those of peace—and creates that vigorous prosperity, that animated zeal and happiness, which have spread over this broad country, and which have allured from their homes, from the tender ties of blood, and the graves of their fathers, emigrants from all parts of Europe."

Moral Culture,

It is now urged, by a hundred pens, is indispensable to the formation of good citizens; and it is a branch of education, that all agree, has been greatly neglected in training up the youth of our country.—There is not a better antidote to vicious habits, and immoral conduct, in youth or manhood, than steady attention to useful business. Indolence is the parent of vice, all the world say, even, in many cases where the mind has been trained to moral culture. It is easier to prevent, than to cure, moral, as it is physical diseases. If these propositions be correct, then industrial schools would tend greatly to aid moral instruction, if it did not in fact inculcate it. Idleness being the parent of mischief, we should seek to prevent it, by extending to labor those aids which would enlighten and elevate it in the scale of society—which would render it independent and desirable. Young men, carefully educated in the practice of husbandry, or any other useful employment, and so instructed, at the same time, in the philosophical principles of their business, as to feel a reasonable hope of becoming respectable and useful in its pursuit, would be the last to indulge in immoral habits, or to eat the bread of idleness; they would feel animated by the strongest inducements to become examples of industry and virtue—they would love their business in proportion as they became acquainted with its principles, and as it promised, the certain means of rendering them intelligent, independent and useful. Many persons are idle, and often consequently vicious, because they were never taught to labor, and know not the proud glow of independence which one feels who can say, on scanning his means and the enjoyments they yield him—"All these are the fruits of my industry.—Thanks be to God, that I have been thus enabled to provide for myself and to help others." We become attached to good habits, as well as to bad ones, if we put them on in youth. Thus we see men who have been inured to industry, clinging to it, as to a companion of youth, after the inducement to practise it, and not unfrequently the ability to perform, have ceased. And we see many, very many, as strongly attached to habits of idleness, with its concomitant evils, because they were wedded to it in early life, though want and dishonor stare them in the face.

We all know the happy influence of houses of refuge, in reforming juvenile offenders by moral discipline, and *instruction in a business by which they can earn an honest livelihood, and render themselves respectable in society*—considerations which perhaps never entered their minds till they became inmates of these moral and industrial schools. If then habits of industry will *reform* and *reclaim* those who have been vicious, we have the strongest reason to believe, that they will be equally efficacious in *preventing* the formation of bad habits. We therefore say, if you would raise the moral tone of society, teach your youth to labor and to think—teach them to provide honestly and abundantly for themselves, by giving them early habits of industry, and few of them will ever become tenants of a jail or a poor-house.

"What can the Legislature do to improve Agriculture?"

This question was propounded by a commercial convention lately convened at Richmond, Va. to a committee, who were directed to answer it by report. A report was made by Mr. Ruffin, editor of the Farmers' Register, from which we make the following extract.

"In reply to the inquiry, 'what can the legislature do to improve agriculture?' your committee will merely state, in general terms, that every means will be useful and profitable by which light and knowledge will be diffused, and no other action, no other aid or boon is desirable, or would be beneficial. There are so many valuable modes of diffusing agricultural knowledge, that the difficulty is not to find, but to choose among them. Boards of agriculture, agricultural societies, and premiums upon a judicious plan, agricultural schools and experimental farms, and agricultural publications, each and all, elsewhere, have worked admirably to forward the great end in view. But if no more were done at first, by legislation, than the institution of a board of agriculture, as merely an investigating, consulting, and advising body, incalculable benefit might be expected to grow out of one and a cheap mode. Such a board (if the system of furnishing aid should go no further) might be limited in annual expense to $1500, or barely more than the general assembly has spent, year after year, merely in the time used for electing an individual to execute the mechanical business of printing the journals and documents—less than the expense in time and money caused by each single elaborate speech dilivered in that body upon federal relations—not one fourth part of the annual expense of the geological survey, and perhaps not one hundreth part of the money wasted in every session in useless, or worse than useless, debate."

The report closes with a resolution, "that the commercial and general interests of Virginia and North Carolina, as well as the peculiar interest of the agricultural class, require that legislative aid should be given, promptly and effectually, to the diffusion of agricultural instruction and knowledge, and to the promotion of agricultural improvement."

The Mulberry.

We stood alone, among our cotemporaries of the press, for a long time, in maintaining, that the morus multicaulis was too tender to withstand our northern winters. We see our opinion now confirmed by some of the longest established growers, who, if we remember right, once maintained a contrary opinion. And we notice in a late Farmer and Gardener, printed at Baltimore, Md. "directions for preserving the multicaulis through the winter,"—which consists in *taking them from the ground*, and covering them with earth in the cellar. At a late farmers' meeting in Northampton, Dr. Stebbins and Mr. Whitmarsh, who have both, we believe, for a number of years, been actively engaged in propagating and vending the mulberry, pronounced the multicaulis not suitable for our climate. We subjoin quotations from the remarks of each.

"Experience has taught us," says Dr. Stebbins, "that our climate is not congenial to the habits of the morus multicaulis plant; many thousands have been lost every year in consequence of not providing a shelter and protection for them against the frosts of autumn, and the severe cold of our winters. It has been demonstrated to us by expensive experiment, that the tree is not suited to our boreal seasons."

"The principal objections to this tree is," remarks Mr. Whitmarsh, "that the leaves contain a great proportion of watery matter, which causes the worms that

are fed upon them to be unhealthy, and hence injure their silk. He thought this objection would operate more seriously at the south, where the seasons are longer and warmer. The heat would cause them to grow more rapidly, the leaves would be larger, and he thought, imbibe more moisture. He regretted the universal adoption of this tree at the south, and feared that a failure caused by this fact, would retard the progress of the [silk] business ten years, by discouraging so many who would become losers."

We quote the above as affording hints that may be useful to those who are about embarking in the silk business; though we somewhat doubt if Mr. W. is correct in his objections to the leaves of the multicaulis, and we think he is decidedly in error in supposing that this objection, if well founded, will be greater at the south than in the north—the greater heat at the south decreasing, instead of increasing, the succulence or watery properties of the foliage.

These two gentlemen give a decided preference to what they term the *Alpine*, which Mr. W. says is "the kind universally used in France and Italy." We do not mean to charge these gentlemen with wanton deception, for we have a high opinion of their good standing; yet there is something so mystical in these declarations—so contrary to received opinions—that we can not pass them as current truths, without asking for some further explanation. We have examined all the botanical and other works in our possession which treat of the mulberry, and they are neither few nor of doubtful authority—and yet we can not find in any one the term *Alpine* given to any species or variety of the mulberry. And as to the assertion that the Alpine is universally used in France and Italy, we have Gen. Tallmadge's declaration, that in Finizio's establishment, in Italy, which he visited, 3,000 lbs. of sewing silk are made a week, mostly from the black mulberry (*M. nigra;*) that Finizio stated to him, that the worm fed on the black mulberry made the strongest thread; that on the white mulberry finer and better fabrics; that on the Chinese (*M. multicaulis*) still finer and more delicate fabrics. And we think, (for we have not the letter at hand,) that Gen. Tallmadge says the white mulberry (*M. alba*) is almost exclusively employed in France. Loudon says, "the M. alba is commonly cultivated in France and other countries, for its leaves, to feed silk-worms, though in some parts of Spain and Persia they are said to prefer the black mulberry."—*Enc. Plants*, 782. The Alpine, we presume is a *variety* of the M. alba, and is probably the one alluded to by Loudon, where he says—"the most valuable variety of the M. alba is one grown in Italy, and especially in Lombardy, with vigorous shoots, and much larger leaves than the other." This may also be the Dandolo of Loudon, and the Italian of Sweet, and possibly the Brussa of Asia, from whence it may have been brought to Italy.

Dr. Stebbins advertises the public, that the undernamed (and many not named) descriptions of the mulberry, may be had of him in Northampton, viz. the Manilla multicaulis, the Canton, the *Alpine*, the *Asiatic*, the *Smyrna*, the Brussa and Dandolo. Now we protest against this fabrication of new names, for old things, whether it be from ignorance, for novelty, or to subserve the interests of the trade. Those printed in Italics appear to us to be absolutely of new coinage. This unnecessary multiplication of names tends to mystify the business, to deceive the public and to retard a useful branch of national industry. We believe that all which are named in the Doctor's advertisement are merely *varieties* of the white mulberry, differing somewhat in the size of their foliage, and in their hardihood, but very little in their properties for silk.

We have no sort of objection that Doctor S. should puff his own wares, or his own kind of trees—but we do object to his doing it to the prejudice of others, and of truth—which he indirectly does when he remarks—"The Brussa and Dandolo appear to be selected white mulberry—leaf not large—tree hardy, and there are some other varieties, *which may be used for change of food!*" Now if the Doctor has seen the cocoons and silk produced *exclusively* from the Brussa, he must know that the insinuation here made, that it is unfit for the *entire* subsistence of the silk-worm, and the production of excellent silk, is neither ingenuous nor true; and if he has not this personal knowledge, he has no right, as an honorable man, to give the intimation imputed to him.

The general impression is, that the M. multicaulis will produce few or no seeds. This is probably owing to its rapid and continued growth of wood—and the tree will probably fruit freely when it has attained to maturity of growth. We have yet none but young trees among us, comparatively; and it is particularly remarked of the mulberry, that young trees are shy in bearing, and that the quantity and size of the fruit increases as the tree advances to maturity.

In the East Indies, according to Loudon, the plants are raised from cuttings, eight or ten of which are planted together in one pit, and the pits are distributed over the field at the distance of two or three feet every way. These cuttings being made firm at the lower ends, soon form stools about the size of a raspberry bush, and from these the leaves are gathered. The stools are cut over once a year to encourage the production of vigorous shoots from the roots.

Spirit of Agricultural Improvement in England.

The spirit of agricultural improvement seems to have been awakened in England in an eminent degree, and a zeal to pervade all classes, particularly those of the higher orders, to give to this primary branch of labor, every stimulus and encouragement to improvement, as the great business which constitutes the basis of national prosperity and greatness. Not only has a national society been organized during the last year, but several county societies have gone into operation, under the most flattering prospects of usefulness. We make some extracts below, from the proceedings of the Yorkshire society, at their first annual show, as well to show the spirit that prevails there, as that our readers may profit by the information and suggestions which they contain. After the exhibition had closed, which was remarkable for the great number of fine animals, and new and useful implements of husbandry, which were shown, twelve hundred persons sat down to dinner, which being finished, and the health of the royal family drank—the Chairman, Earl Spencer, rose to explain the objects of the society.

"This being the first dinner of the Yorkshire Agricultural Society," he remarked, "I feel that it is my duty to call your attention to the objects we had in view in establishing this society. Those objects are, to promote agriculture in all its different branches—to render the cultivation of the soil, and the breeding of stock, as improved as the present knowledge of the country can make it—what I mean by improvement in agriculture and good farming is, to cause the greatest amount of produce at the least possible expense. It is not that we wish to encourage farmers in extravagant expenses to make their farms like gardens, when that will not answer the purpose of their pockets—but to employ their capital judiciously, so as to improve the land, and obtain as large a return as they can for the money they lay out. On this, the first occasion of our meeting, we have had a good exhibition of stock, and now, I am happy to say, a full attendance of members. The exhibition we have had to-day, I need not tell you, is admirable as to the quality of the animals shown, and the number was very great indeed. But the object of this meeting is not merely the exhibition of stock; it is collecting together a body of the farmers of England, in order that they may, by communicating with one another, and by what they see and hear, improve themselves in the profession in which they are engaged. When I address this large assembly, in this I also can say, that we have been successful. It is not necessary for me to tell you what the advantages are of improving the breed of cattle. I do not recommend to farmers of small capital to attempt to buy females of great value, and lay out large sums to produce male animals for the benefit of others; because nothing is more essential in farming than that a man should consider the capital he has, before he engages in any undertaking; but it is for persons of large capital to endeavor, by taking pains themselves, to produce male animals, fit to improve the different breeds of domestic cattle in this country. These exhibitions are of the greatest advantage, not merely to persons of the class I have described, but to all farmers whatever. Although I would not recommend any extravagant expenses, depend upon it, if you be careful in the selection of your male animals, you will, even with more moderate females, farm to greater profit. This society also seeks to improve the cultivation of land. I need not tell such a meeting as I am now addressing, that the throwing away manure upon the growth of weeds is not a profitable way of farming; that leaving land undrained and growing rushes instead of grasses, is not good farming; that getting out the heart, by neglecting land, and not applying a proper degree of cultivation is unprofitable—because, depend upon it, that money laid out in improving is the money that will come the quickest back again into your own pockets. With this view, the society has given premiums for the best cultivated farms. By so doing, I am quite sure, we are not only giving those good farmers new information, but we are encouraging them in doing their best. Besides those, we have given prizes for publications on agricultural subjects. It is our intention that each member shall receive a copy of the prize essays gratis, on applying to the secretary. I have stated the objects of this society, and the modes by which we intend to promote it—our object is to produce the food of man in the cheapest manner in which food can be produced. I think the society deserves the support of not merely landlords and farmers, and those connected with agriculture, and the value of land, but also of the commercial and manufacturing classes of the country; it is also good for the laborers of the country; in short, a society which has for its professed object, food at the cheapest rate, is good for every one who eats."

P. B. Thompson—"One of the first objects of these meetings, in addition to what had been so ably stated by his noble friend, was to keep up an open, unreserved communication, between gentlemen and farmers, which he trusted that meeting would promote to the utmost of their power. It was not by speeches, but by plain, honest, unreserved conversation, that he thought these meetings ought to be sustained; and if any person knew any thing more than his neighbor, he was bound to state it. Well, then, yesterday morning, he received a parcel of wheat from Berkshire, which he thought likely to be serviceable if grown in this country. It was found three years ago, growing on the mountains of Switzerland; since then it had been grown in England, and the sample he produced was grown in Berkshire. It was sown on the first of February, called Royal Standard wheat, the crop had now (29th Aug.) been reaped a fortnight, and was supposed to be at least seven quarters [56 bushels] the acre. Another subject worthy their attention was the application and formation of manure with the least possible waste; next year he hoped to be able to give them some useful information upon that point. He never enjoyed a greater pleasure than in witnessing the cattle that day. He never looked over so good an exhibition of female stock as he had witnessed that day—indeed 200 guineas [$932] had been offered for one of the cows shown. That was a practical proof of his noble friend's observation, that the money came back again to the farmer's pocket."

J. W. Childers, Esq. M. P.—"He believed that an exhibition such as he had that day witnessed, had scarcely ever before been seen in England. But he thought that only a beginning, when he saw that within a month or two, the society had doubled the number of its subscribers, he felt that the society would go on increasing from year to year, until its extent was only equalled by the Highland Society, on the model of which it was formed. The Highland Society numbered 3,000 members, and seeing that they had reached 800, he had very little doubt but they would also reach 3,000." Mr. Childers said he was about to propose as a toast—"the cultivator of the best farm"—and proceeded to say—"he trusted in time that every farm in Yorkshire would be raised to the state of this prize farm. He believed it was considered almost a garden, being in such fine condition, and he saw no reason why the county should not teem with farms of this description. What was it that gave this farm such a superiority? its soil was naturally good, but so was the soil of a great deal more land in Yorkshire—it was science and capital, united, that gave those fertile and beneficial results."

"W. R. C. Stansfield, Esq. M. P.—proposed the health of Mr. James Roberts, the tenant who, within the last five years, had drained, in the most effectual, judicious and economical manner, the largest quantity of land in proportion to his occupation. He had the greatest satisfaction in calling their attention to what he conceived was one of the most important branches of the society's operations—drainage he considered the foundation of every thing. Unless they had the means of preparing the soil for the manure and seed all was wasted. He feared this subject was but little considered, either in England or Scotland; if he took his own neighborhood as an example, a mountainous country, with a numerous and very industrious population, the means of improvement by draining had scarcely begun. Without draining, land was unfit for turnips or seed husbandry—it was unfit for human occupation."

Mr. Bates, a successful competitor, on his health being drank, made a handsome acknowledgment. He drew a contrast between the condition of the cattle now and fifty years ago; and proceeded to say, that

"The interests of agriculture he considered of permanent national importance; it was a science to which chemistry and all other branches of natural philosophy ought to give place. He alluded to the proposal for introducing a section of agriculture in the British Association, and regretted that there was not a Professor of Agriculture in either of the universities."

E. S. Caley, Esq. M. P.—"Thus it was, that as science advanced, agricultural operations were carried on with ten times more advantage than before, merely, because, instead of the observations of one man, or two men, they had now the result of the combined operations of all the world. That was the reason why he anticipated the greatest advantages from meetings like that. They were all brought together, not merely to look at the fat stock, as Earl Spencer had observed, but to join in harmony, to impart the result of their own observations, and to receive information from the experience of others; and as it is well known that two heads are better than one, they were much more likely to draw true, faithful and profitable conclusions, as related to agricultural operations, by meeting there and comparing their different conclusions, than they would be if they were all to stay at home and say nothing. He did not say they could not learn anything by staying at home; but, at all events, they could not learn what their neighbors were doing. There was an old saying prevalent in the world, about an old country woman, who had never been from home in her life, but on the occasion of her young mistress being married, was prevailed on to go to the next village to see the festivities, and on getting to the top of the hill, she said—'Lord hey massy on us! wheeaivver thowt t'world was hoaf see big as this!' He mentioned this to illustrate the advantages of not staying at home, in order, not merely to learn from others, but to communicate to others what they knew themselves. He would say to them—'freely ye have received, freely give.' It was not merely for the love of gain they were assembled together on that occasion, or that they cultivated the noble science to which they were addicted; it was not merely for the sake of

gain, but for the pleasure of breeding the best ox, or cultivating the best farm. There was something beyond this, some better feeling in their nature to gratify, than the mere love of gain. Was it not a manly, an honorable satisfaction,—what was called in Yorkshire 'a bit of pride,' to show the best sheep or ox to their neighbors. It was not merely the love of gain, but the love of approbation. It was a pleasure to their hearts to look round their own farm-yards, and see to what perfection things might be brought, what symmetry their forms might be made to exhibit. It was not merely the love of gain, but the love of beauty, and the love of praise from their neighbors, who were alike gratified in affording it. It could not but be gratifying to them to see almost all the gentry of the country collected together here to view and admire their productions."

Postage.

We dislike to be harping upon this subject; but it is really one of some moment to us. We are in the daily habit of receiving letters by mail, enclosing a dollar or other bill for the Cultivator, with single postage paid, and extra postage charged here to us. This extra postage is generally 12½ or 25 cents, and often 50 cents—a serious drawback upon our profits when taken in the aggregate. We beg our friends to recollect, that every enclosure in a letter subjects us to additional postage; and if it is not paid where the letter is mailed, it must be paid here, where the error is sure to be detected. We are in the annual receipt of four to five thousand letters, which should come to us free of postage, but upon a great many of which we are charged, and charged legally, with additional postage. We beg our correspondents to abate the evil.

Short-Horned Cattle.

The Short-Horns maintain their standing in Kentucky.—At a late sale of Gen. Gerrard's stock, at Paris, Ky. eleven animals of pure improved short-horn blood, sold for $8,157. One, Exception, was bought by B. J. Clay & Co. at $1,830. At the same sale, ten animals of mixed blood, sold for $2,580, averaging over $250 each.

Mr. Whitaker's stock, lately sold at Powelton, near Philadelphia, went off at good prices. The prices and purchasers were as follows:

Dairy Maid, 3 years, $540, J. Gowan, Philadelphia.
Victoria, 3 years, $520, G. Brinton, Pa.
Nunnia, 3 years, $500, C. Warwick, Va.
Viviana, 3 years, $530, W. Heyser, Pa.
Thornville, 3 years, $500, do
Lady Whitworth, 2 years, $530, C. Warwick, Va.
Lobelia, 2 years, $400, W. S. Torr, Pa.
Enchantress, 2 years, $500, R. A. Taylor, Baltimore.
Minerva, 2 years, $360, Dr. Noble, Pa.
Sarah, 2 years, $380, Mr. Beltzhoover, Baltimore.

H. Clay, Jr. lately sold his imported short-horned Durham cow, Princess, to J. & R. Allen, for $2,000! This is the climax.

Agricultural Items.

At the meeting of the Highland Society of Scotland, in August, 177 applications for admission as members were made—a pretty good evidence that the society is not on the decline, though more than fifty years old.

Apples may be kept in a dry chamber, over a room in which there is a fire, even in winter. They preserve best in tight barrels; and after they are unheaded for use, they should be kept constantly covered with a linen cloth, in two or three folds. They are not much injured by frost, if they are kept in total darkness until they be used, or become thawed.

An Agricultural and Horticultural State Society has been organized in Michigan, Hon. Joshua Howard, president. They have resolved to petition the legislature to establish a board of agriculture, to make appropriations for the support of a state agricultural paper, and county societies—and to authorize school districts to draw their quotas of the school fund in agricultural works and publications, to such an amount as the finances of the state, and the school fund, will warrant. We are happy to find our young sister thus early engaged in looking to the substantial wants and permanent interests, of her growing family. We hope she will prove a kind as well as a wise mother in these matters, and teach her children to *earn*, that they may know the true luxury of enjoyment.

Grease for wheels and machinery.—M. d'Arcet, the celebrated French chemist, and master of the mint in France, recommends the following composition as the *best grease for wheels and machinery*, viz.: "Eighty parts of grease and twenty parts of plumbago, (black lead,) reduced to very fine powder, and intimately and very completely mixed together. A very little suffices." So says a French journal.

Liniment for the galled backs of Horses.—White lead moistened with milk. When milk is not to be procured, oil may be substituted. "One or two ounces sufficed for a whole party for more than a month." —*W. H. Keating.*

To preserve cheese, we perceive this year, for the first time that it has met our notice, that some of our dairy women envelope the cheese closely in a cotton cloth, when it comes from the press. The process of rubbing the cheese attaches the cloth so closely to the rind, that the cloth is not noticed by a superficial observer. This treatment preserves the cheese from insects, prevents its cracking, and secures to it a thin rind.

Planting of Trees.—Charles Blakeslee, of Newton, Ct. states to us, that last spring he planted out 14 maple trees, in the following manner:—He put them in holes so shallow as to bring the tops of their roots to the surface of the ground. He then brought loam and turf from a hollow, and raised a mound over the roots one foot high, and eight feet in diameter, and covered the mound with small stones. Notwithstanding the drought of the season, every tree thus served lived, while others, planted in the usual way, all died. Mr. B. ascribes his success to the fact, that the small stones prevented the exhalation of moisture, and deterred cattle and swine from rubbing against and loosening them.

Rohan Potatoes.—Last spring, we sent to Mr. Shepherd, P. M. Northampton, Mass. a peck of Rohan potatoes, to be presented to our patrons in that town. We see in the account of the October fair, in that county, what we deem to be some of the products of this seed. W. Clark, Jr. raised from one potato, 2½ bushels; Mr. E. Mitchell, from 4 lbs. of seed, raised 18 bushels, weighing 1,173½ lbs.

A Knitting Machine was exhibited at the Northampton fair, with which a child of 15 years of age can turn off two pair of stockings per day. It costs but $18.

Apple Pomace.—Farmers, save your apple pomace, for your cows or your pigs. If kept from fermentation, it may be fed to milch cows with great advantage. We have known it to double the quantity of their milk. Pigs will thrive upon it after it has fermented. It may also be made into manure, by mixing it in a compost with quicklime and earth—the lime neutralizing the acid and inducing decomposition.

Evergreens.—M. Vilmorin, the great Parisian seedsman, has found that pines, and other resinous evergreens, grow with great luxuriance on land manifestly unfit for tillage or grass—and that they will not grow well upon a calcareous soil. These conclusions seem to be confirmed by the natural growth in our forests—the pine and other evergreens being generally found upon poor sandy lands, and very seldom upon soils abounding in the carbonate of lime.

M. Vilmorin has come to the conclusion, from numerous experiments, that no species of American oaks will succeed in bad calcareous land; and M. Poiteau goes so far as to say, that the soil of Paris has become so eminently calcareous, from the constant additions it has received from old buildings and repairs since it was first erected, that there is scarcely a tree which can grow there satisfactorily except the elm. Those who plant shade trees may profit from these hints.

Silk Culture.—Dr. Perrine has pronounced the morus multicaulis speculation a splendid *humbug*. The doctor insists, that all efforts to raise silk, from the multicaulis, or even white mulberry, north of Southern Virginia, will ultimately prove abortive, both from the coldness of the climate, and the expense of labor. The doctor is certainly in error. Although the public expectation and enthusiasm have been worked up to an unreasonable pitch in this matter, yet we have not a particle of doubt, that where the business is judiciously managed, as a branch of domestic or household labor, the benefit will be palpable, and the profit certain.

Rohan Potatoes.—The price has advanced; and such is the demand for them, that we will not pretend to set to it any conjectural limits. Mr. Thompson, of Catskill, is the only grower we know who has them now for sale. We pronounced their quality *good* for the table. A better opportunity of knowing them, will now warrant us in saving they are VERY *good*.

Potatoes.—1,000 tons of potatoes had been shipped in the Thames, Eng. in October, for the New-York market. The value of the potatoes sent from Maine to southern ports has been stated at $300,000. Five hundred barrels of Irish potatoes arrived at New-Orleans on the 18th November. The price there was $9 per barrel, or fifty cents per dozen.

Texas.—Flour is quoted in this promising land at $22 per barrel; potatoes $7 per bushel, and butter and cheese at 75 cents per pound.

Two bushels of hard Dutton corn, by being boiled a few hours, we learn from the Farmers' Cabinet, have been found to expand to the bulk of five bushels and a peck.

We have received a sample of *tree*—not *tea*—corn, 8 rowed and yellow, raised at Caldwell, Warren co.

The thermometer stood at zero, at 6 on the morning of the 25th November, at our house; at Utica, it was 4°, and at Montreal, 6° below zero.

M. Multicaulis.—A public sale of one year old plants was held in Boston, in November. They were sold in parcels of fifty. The first lots, untrimmed, and five feet high, were bid off at one dollar a tree; subsequently, some lots, partially trimmed, went off at 37½ cents per tree. Cuttings, with two buds to each, were sold at two cents.

The Queens County Silk Company, Md. held their first sale—not of silk, but of multicaulis trees and buds—on the 18th November. The sales amounted to $2,200, and averaged about $50 per thousand cuttings.

To convey grafts of trees, cuttings of vines—and why not seeds?—in safety to a distance, a writer in Loudon's Magazine recommends, that they be placed in a tin case or cylinder, filled with honey. The honey hermetically excludes the air.

New Agricultural Journals.—The *Farmers' Advocate*, a semi-monthly sheet in octavo, published at Jamestown, N. C. by John Sherwood, price $1.25—and the *Michigan Agriculturist*, a weekly quarto of 8 pages, price $2 per annum. The more agricultural journals, the more agricultural readers, and the more agricultural improvement.

The Silk Worm.—According to the Silk Culturist, Judge Spencer, the past season, raised 40,000 silk worms, and lost but 4.

Glass head dresses.—Our foreign journals announce that a new discovery has been made in the manufactory of glass, by which it is rendered so pliable as to make cloth, or fabric, of the finest texture. Pieces have been produced 2½ yards long, and from nine inches to thirty-six inches in breadth; and some very fine ladies' head dresses have been made from this material, which all considered both very curious and very useful.

A new breed of hogs, is noticed in the Michigan Agriculturist, as abounding on the banks of the Detroit river, which will leap "a five feet fence without difficulty." They may be called *leapers* if not *lepers*.

The Rhode-Island Society for the Encouragement of Domestic Industry, have just appropriated $150 of their funds, as a subscription to the New-England Farmer, to be awarded in premiums. Bating any interest we may be presumed to have in the precedent, we may be permitted to say, that it is rewarding those who *do well* with the best means of *doing better*.

Premium Butter and Cheese—The Massachusetts Agricultural Society awarded, in December, the following premiums for the best butter and cheese exhibited for their inspection.

$100 to L. Chamberland, of Westborough Mass. for best butter.
$50 to L. B. Hopgood, Shrewsbury, Mass. 2d. best.
$30 to W. Barhop, Barnet, Vt. 3d. best.
$50 to D. Lee, Barre, Mass. for the best old cheese.
$30 to T. Fisher, Burke, Vt. for the best new cheese.

The premium butter sold from 33 to 47 cents per pound. It was mostly exhibited in stone pots.

Berkshire pigs are getting into as high repute among swine, as the improved short horns have become among neat cattle. We had heard, in several cases, of individual pigs being sold at fifty to eighty dollars. The Franklin Farmer, of the 8th December, informs us of the sale of a pair of Berkshire hogs, at the extravagant price of $500! The purchaser was William P. Curd, Esq. and the seller John R. Bryant, of the society of Shakers, all of Kentucky.

Sidney Spring, of Pratt's Hollow, Madison county, N. Y. says he obtained from one-fourth of an acre, one hundred and seventy bushels of carrots, and from the same quantity of land two hundred bushels of mangold wurtzel.

He harvested from five and an half acres, three hundred and twenty bushels of sound corn; two hundred and ninety bushels of which he sold at one dollar per bushel—the nett gains of which, he says, was about $40 per acre. This land he purchased seven years ago, for eleven and an half dollars per acre.

It is stated in the Franklin Farmer, that a cow belonging to Dr. Samuel D. Martin, gave the day her calf was ten days old, 41 quarts of milk.

A cow, the property of Mr. Kent, of West Springfield, has given, during sixty days, beginning in June last, 1346 quarts of milk!! averaging 22½ quarts per day. Largest yield, 11 quarts in the morning and 16 quarts at night.

Cows kept warm and dry in a stable in cold weather, will yield one third more milk than if exposed to all kinds of weather; and while the weather is wet, they will give twice as much, if stabled, as they will if exposed to cold storms.

A pair of Berkshire hogs, from the stock of C. N. Bement, Three Hills Farm, Albany, was lately sold in Kentucky for $250.

The free use of charcoal for hogs, confined in pens, is highly recommended by many individuals, whose habits of attention, observation and experience entitle them to credit.

Mr. Samuel Woodruff, of Windsor, Conn. obtained from twenty Rohan Potatoes twenty and a half bushels, some of which weighed 2 lbs. 13 oz. each.

Mr. Samuel Crary, of Bethlehem, Albany county, killed on the 5th of December last six pigs, between eight and nine months old, which weighed after being dressed, as follows—272, 269, 253, 252, 240, 220—amounting to 1506 lbs. averaging 251 lbs. each.—They run during the summer in a clover pasture, and fed the wash of a small dairy—fattened in the usual way, and no particular care taken with them, as there was no particular object in view, except fitting them for market. Nine dollars per cwt. was readily obtained for them. They were five-eighths Berkshire and three-eighths China breed.

At the Fair of the American Institute, in October last, a silver medal was awarded to C. N. Bement, for his Vegetable Cutter and a small mill for crushing grain for feeding stock. He also received a silver medal for fine specimens of Rohan potatoes, and a diploma for his Turnip Drill, (a silver medal having been awarded him the year previous.)

Notices to Correspondents.

Oaks.—Friend Bull's letter and eight acorns came to us through the mail, charged $1.12½ postage. The acorns must of course go to Washington. It is not easy to determine the species to which an acorn belongs, without seeing the cup and the leaf. From the description of the cup being fringed, we think it is the over-cup white oak, the Quercus lyrata of Michaux.

Indurated Clays.—We have received several samples of earth from Rufus Clark, of New-Brunswick, which have been examined by a scientific gentleman, who considers them indurated clays, similar to those found in various parts of New-Jersey; the white is of a fair quality, and would probably be of service in the manufacture of pottery, and possibly of porcelain.

A gentleman at Maysville, Ky. asks, if the soil he has described to us—a rich loam, which has lain some years in pasture, and has just been ploughed—is suitable for the Rohan potato, and whether we would advise to plant these potatoes and his corn in *hills*, instead of *drills?* We respond affirmatively to all these questions—believing that the culture in hills will be less expensive, and the product equally abundant, as if planted in drills.

Morus Multicaulis.—In answer to the inquiries of S. Rosa, Painesville, Ohio, we are almost disposed to say, that people, now-a-days, esteem that kind of mulberry best, for the manufacture of silk, which they want to sell. We verily believe there is no great difference in the quality of the different mulberries for silk, under household management. The seed of the genuine multicaulis cannot be had. The price of the trees ranges from 25 cents to 25 dollars. The Messrs. Prince of Flushing, *advertise* 65,000 trees, and trees are for sale at Philadelphia, New-Jersey, &c.

Tree Corn.—We have several applications for Mr. Thorburn's Tree Corn, which, we are sorry to say, we cannot supply. It is to be had of the Messrs. Thorburn, in New-York and Albany, seedsmen.

One of our subscribers in Indiana, Joshua Cottingham, writes as follows:—"Since I began to read the Cultivator, I have been adopting someof its recommendations, particularly in regard to rotation of crops. I find that by mowing my clover and grass one season, pasturing it the next, and then turning it in deep for wheat, sowing on the first furrow, and harrowing in the seed well, I get double the crop of wheat that my neighbors do." Now, if Mr. C. raises 10 acres, and adds 10 bushels to the product of each acre, as we may infer, by alternating grain and grass, his gain in a single year, by taking the Cultivator, in his wheat crop alone, is more than enough to pay for the Cultivator as long as he lives, though he should reach the next century. The average product in his vicinity, our correspondent advises us, is 30 to 60 bushels of corn, and 10 to 30 bushels of wheat to the acre; and he expresses a belief, from his own improvements, that the product may be doubled by manuring—a thing not there thought of—and judicious management. There is great danger, that the "skinning" business will be carried to a prejudicial length in the new, as it certainly has been in the old states.

Brussa Mulberry.—Sheldon Basset, of Hector, has sent us sundry interrogatories in regard to this tree.—All the reply we can make is, that the seed was originally brought from Turkey, by Mr. Rhind, we think five or six years ago, and planted by the late D. Ruggles, Esq. at Newburgh. We saw the plants in the springs of 1837 and 1838, on the place of their growth. They appeared not to have been injured a particle by the winter, although much crowded and much of the wood slender. The seed has sold at $10 per quarter of a pound, which quantity has given fifteen to twenty thousand plants. We do not know that there is any seed for sale in this country. The plants may be had at the Albany Nursery, at fifty cents to one dollar each, according to size. The tree, it is presumed, may be propagated like the other varieties of the mulberry. The leaves are six inches or more broad. The growth from the seed last season, in a crowded situation in the nursery, was about two feet.

Acknowledgements.

We have received two apples from Mr. Rotch, of Butternuts, believed to be *vandeveers*, tender, juicy, and of pleasant, though not of very high flavor—a fair, handsome dessert apple, above the medium size and quality. The Tiffin, Ball and Water-fallow, from Mr. Thompson, of Catskill, together with a pear, name unknown, but of flavor strongly resembling the Seckle, in eating in December and January. We received grafts of the Ball and Tiffin, from Mr. Saul, Lancashire, Eng. and sent them to Mr. Thompson, who propagated them. The Ball apple is of mammoth size, flat, the stem inserted in a deep cavity, yellowish green colour, with a red cheek, in eating in November, juicy, but of medium flavor. The Tiffin is a beautiful red apple, somewhat larger than the Spitzenburgh, but of similar shape; flesh crisp, yellow and sprightly—we think an excellent dessert winter fruit. The Water-fallow resembles in size and flavor the Fall Pippin, though later, as it comes in eating after the former is done. It is from the middle states, and may be pronounced as good as the Fall Pippin, with the advantage of keeping longer. Two apples from Vermont, from Dr. James, of more than medium quality—both seedlings. *See seed grain.*

Female Patronage.—Among 29 subscribers received in a letter last week, from the "Bay State," we recognize among them with great satisfaction, the names of *sixteen* ladies.

CORRESPONDENCE.

Great Ruta Baga Crop—Mixing Soils.

Schaghticoke, Dec. 1, 1838.

Mr. BUEL—SIR—I send you a statement of the produce and culture of a patch of ruta bagas, which I have raised the present season, the profit of which, if not the greatest, I flatter myself, is not the least, which will be offered for your premiums; as the summer has not been favorable to the produce of large crops of turnips. The soil is a sandy loam, (generally so called,) but contains by far too great a proportion of sand to be termed good, and I think myself amply compensated for applying from 50 to 100 loads of clay per acre, in the increased products of the first two years. The manure was spread and ploughed in immediately before depositing the seed. They were sown the first day of June, in drills about two feet apart one way, and owing to a partial failure of the seed which was old, a foot or 18 inches the other, which I am persuaded was an advantage to the crop, as they grew very large; one weighed over 24 lbs. after being trimmed. The after culture was one dressing of plaster, which I think is of very great advantage to them, especially in a drought; three hoeings or weedings, in which care was taken not to earth them up at all. The harvesting is very much facilitated by using a hoe ground sharp to cut the tops as they stand in the ground, after which they are pulled with a hook; in this way two men will gather seven or eight hundred bushels of them in a day. I had 970 bushels, calculating 70 lbs. per bushel, from 126 rods, at the rate of 1,231 bushels per acre. I had another piece I think equally as good, which were not measured.

The profit of the 126 rods is as follows:

Dr.	To 20 loads manure, at 25 cts.....	$5 00
	Carting and spreading the same, ...	3 00
	Ploughing, rolling and harrowing,....	2 00
	Seed, ...	0 37½
	Sowing, ½ day, ...	0 25
	3 hoeings, 10 days, 6s.....	7 50
	Harvesting, 6 days, 5s.....	3 75
	Interest on land at $100 per acre,...	5 50
		$27 37½
Cr.	By 970 bushels ruta bagas, at 1s. 3d..	$151 56
	Tops for fodder,.....	5 00
	⅓ds manure for succeeding crops, ...	5 32
		$161 88
	Deduct charges,.....	27 37½
	Balance, ...	$134 50

Profit $134.50, or $170 80 per acre.

I am trying an experiment in feeding them, which if important, shall be communicated to you and the public.

Yours, &c.

JOHN C. MATHER.

Corn Crop.

Volney, Oswego co. Nov. 27, 1838.

Mr. BUEL—Sir—I saw in your March number of the Cultivator, a premium offered on several articles of agriculture; I therefore send you a statement of one acre of corn raised by me this season, hoping that if I do not prove a successful competitor, the cause of agriculture may receive an additional witness in its behalf. The soil is a warm gravel; the corn was the twelve rowed yellow variety. About the 1st of May, I carried on and spread, all over the ground, seventeen loads of stable and barn-yard unfermented manure, ploughed before the manure dried; bushed and harrowed the ground well, being careful not to disturb the sod, which had lain to pasture four years; and on the 14th and 15th of May, planted the same, three feet and three inches apart each way. It was dressed with seven bushels of good unleached house ashes, mixed with one and a half bushels of plaster, when it made its appearance above ground. On the 10th June, went through between the rows both ways with cultivator; 18th June, cultivator both ways, then thinned to four stalks in each hill, and hoed out the weeds. On the 3d July, cultivator both ways, and commenced hoeing; put no more earth about the hills than we took from them, but carefully cleaned out all the weeds from the hills. The seed was prepared by rolling in tar water and plaster. The corn was cut up the 1st of September, at the ground, and shocked in small shocks, and on the 25th it was husked and housed.

The product is 110 bushels of first rate corn, and 6 bushels of second rate, making in all 116 bushels of corn, and four loads of stalks per acre.

EXPENSE OF CROP.

Ploughing 1 day and board,.....		$2 00
Bushing and harrowing 1 day,.....		2 00
Planting 1¼ days,.....		1 13
Hoeing 4 days,.....		3 00
Horse and hand with cultivator 2 days,.....		2 00
Cutting and shocking 2 days, ...		1 50
Husking and housing 8 days, ...		6 00
Ashes and plaster,.....		1 25
Interest on land at $50 per acre,.....		3 50
Thrashing corn 3 days, ...		2 25
17 loads manure at 25 cents,.....	$4 25	
Carting and spreading,.....	4 25	
	$8 50	
Deduct ⅓ds for succeeding crops, ...	5 66	
		2 84
Total charges,.....		$27 47

VALUE OF CROP.

110 bushels sound corn, at 6s. 6d.....		$89 37½
6 do soft corn, at 3s.....		2 25
4 loads stalks, at 8s		4 00
		$95 62½
Deduct charges,.....		27 47
Nett profit,.....		$68 15½

WILLIAM INGALL.

I hereby certify that I am personally acquainted with the above named William Ingall, and believe him to be a person of veracity, and that the truth of his statement may be depended on.

AARON G. FISH, *Justice.*

Corn Crop.

Port Byron, Nov. 8, 1838.

JUDGE BUEL—Sir—As I have been a constant reader of your valuable paper, the Cultivator, from its commencement, and think I have received much instruction and profit by it. I take the liberty to state to you some facts, that I think may be for the encouragement of some farmers.

Some time in March last, I commenced drawing manure from the barn-yard with two boys and a pair of steers, for the purpose of making them handy; the most of the time we used a horse before them. One of the boys lives with me, the other I hired at $5 per month. We drew the manure on a clover ley of three years' standing, about three acres. We put on the whole, 150 common wagon loads, spread it as even as we could, then ploughed, turned it over smooth, rolled and dragged it well, and planted the 11th and 12th of May, with Robbins' drill-barrow; planted what we call the 12 rowed yellow corn, but some ears have 20 rows, and from 10 to 15 inches long. Aimed to have the rows 3½ ft. apart, hills from 1½ to 2 ft.; from 2 to 3 kernels in a hill; rows north and south. I soaked the seed first planted in warm water, with a little salt-petre in it. The drill did not work well; I then took the dry seed and planted the remainder of it, which generally came up well; but before I knew it, the crows and worms had devoured a great deal of it. I planted it over, and part of it the third time, with the little golden corn. It nearly all stood finely. I went through it three times with a horse and cultivator; hoed it well the first time, was not quite so particular the next. I think it the best piece of corn that I ever saw in the state. Sometime the fore part of September, we cut it up at the roots, and stooked it up, but did not husk any until 15th October. It turned out so well, and was so sound, that I thought I would measure an acre, and see how much was on it. So we took the August No. of the Cultivator, the square and a rope measuring two roods long, went to the field and measured an acre, according to the rule laid down in said number; we measured the wagon box, or first load, 24 baskets full, holding almost 1½ bushels each; we had on the acre 169 baskets, or seven loads and one basket. We took one basket out of the heap, just as it came, and shelled

it, and it weighed 37½ lbs. We husked a load more, and Mr. Cronkhite, one of my hands, thought the corn was still better; we then measured another acre as accurate as possible in the same way, 12 rood 3 feet by 13 rood 2½ feet; we husked off of that 166 baskets, or seven loads, wanting two baskets; we shelled one basket as before, and it weighed 39½ lbs. of shelled corn; the corn was husked and thrown down, the wagon going round to gather; shook down the corn, so that the loads might have been a little larger, and the corn rather sounder, as there was not so much damage done on the second acre by crows, &c. Thus you see, the first acre had on it 112 bushels 23½ lbs. of shelled corn; the second had on 118 bushels 28 lbs. or 118½ bushels; the second acre had on it eight loads of pumpkins; the stalks are well saved, and are excellent fodder. I sowed turnip seed on the whole piece, but the corn and pumpkin vines so covered the ground, that the turnips are worth but little; a few bushels grew to good size since the corn was cut.

EXPENSE OF CROP.

10 days with team and boys at manure, ...	$10 00
5 days with young man and team do.....	7 50
Parts of days ploughing, perhaps 5, ...	7 50
1 day with drag at 12s.....	1 50
1 day planting at 6s	1 75
1st hoeing, went through with horse and cultivator, 3½ days, with 2 men and 2 boys, worth.....	5 37
2d hoeing, 2 men and 2 boys 2½ days each,..	3 75
3d hoeing, 3 men and 2 boys 2 days each,...	4 75
4½ days cutting up, with a man and boy,....	3 94
	$46 35
One-third of the above, is....	$15 35
3½ days husking 1 acre with 2 men and a boy,	5 25
Whole expense of one acre, ...	$20 60

VALUE OF CROP.

118½ bushels of corn from an acre, at 6s. 6d. amounts to	$96 31
8 loads of pumpkins, worth	8 00
Stalks would sell quick at.....	4 00
	$108 31
Deduct expenses,.....	20 60
Nett profit of one acre,.....	$87 71

I am yours, with great respect,
JOSEPH F. OSBURN.

Mentz, Nov. 13th, 1838.

This may certify, that I helped raise the said corn, or tend it, and measure, husk, shell and weigh it, and believe the above to be true to the best of my knowledge.
JOHN HADDEN.

This may certify, that I helped measure the 2d acre as above, and husk it, and believe the above statement to be true.
ABRAM KELLS.

P. O. Port-Byron, town of Mentz, Cayuga county, 17th Nov. 1838.

I am personally acquainted with Mr. Joseph F. Osburn, and have no hesitation in saying that his statement contained within, is in all respects true; and further, that any statement in agriculture coming from him may be relied on. HORACE PERKINS, P. M. & J. P.

Legislation and Agricultural Education.

Clinton College, Tenn. Nov. 13, 1838.

Hon. J. BUEL—Dear Sir—No subject interests me as much as the improvement of the soil and the mind, taken together, as the great business of our nation. And your remarks under the head of "the crops," in No. 8 of the Cultivator for the present year, are so full of the spirit that should actuate all Americans, that I must beg leave to quote them, and I wish they were published again and again, in large capitals. "*Will the politician, the manufacturer, the merchant, and the mechanic pause a moment and reflect upon the controlling influence which the abundance or scantiness of the harvest has upon the prosperity of our common country, and upon their several pursuits? If the harvest is abundant the whole land is prosperous and happy. If the harvest fails, every class feels the electric shock, business becomes stagnant, embarrassments multiply, and the whole land mourns. How important is it then, that all should feel and exert a direct influence in encouraging and qualifying the husbandman to increase the products of the soil—by legislative patronage, and by a system of enlightened education, calculated at once to make better farmers and better citizens.*" I have quoted your remarks all in emphatic characters, because they contain an idea that should be brought home to the full investigation of every American.

Of all the citizens of the U. States, perhaps, eighteen-twentieths are farmers, and if these do not prosper, the other classes cannot. The merchant cannot sell his goods, nor the manufacturer, nor the mechanic his labor, because the farmers who are their customers are unable to buy. The physician cannot prosper, because eighteen-twentieths of his patients are farmers, and unable to pay him liberal fees. The lawyer can not prosper, because eighteen-twentieths of his clients are farmers. The minister of the gospel cannot prosper, because eighteen-twentieths of his hearers and congregation are farmers. The politician cannot make his nation prosperous, because eighteen-twentieths of those who support the treasury are indigent farmers, and money is necessary to carry into effect the measures of the nation. From all this, which must be evident to every one, it appears to me, that our politicians, both of the Union and of the states, have always been legislating at the wrong end of affairs. Roads, banks, schools and commercial facilities, seem to have engrossed their whole care. It is true that these are all desirable blessings, but they are the *result* of wealth, much more than the *cause* of it. Roads and colleges cannot be made without wealth, and banks are useless when they have no money to represent their paper. If the states would adopt a course of legislation that would bring all the talents in them to bear upon their soils, wealth would soon be so abundant that roads, and colleges, and banks would be made wherever they are needed. Fluctuations in the money market would be less frequent and less distressing; for the money in the country would only keep pace with the wealth in it, and there would be less fictitious bank notes created by legislative authority without money to redeem them. But instead of all these blessings, we have none of them to a great extent. Thus it is that one radical error in the community produces a thousand errors and difficulties. Nature made our country principally for agriculture, and the neglect of it, throws every thing else into confusion and distress. Heaven has made no two countries precisely alike and for the same purposes. Then if the inhabitants of any country direct it to the end for which it was created, that nation will be prosperous; but if any country be directed to a different purpose from the one for which it was created, then disppointment and poverty must be the consequence of such perversion of Heaven's laws. It is vain to legislate for the objects which complete a nation's happiness, when the whole country is crippled in its operations by being diverted from the very end for which it was created. Let us have a universal system of scientific agriculture, practised every where in our country, and the observance of the laws of nature (Heaven) in that one branch of business, will soon give us a sound currency, good roads and good schools, as well as all other blessings we desire. Had nature made our country exclusively for manufacturing or for commerce, then there would be great good sense in directing the efforts of our government and our people to commerce or manufactures. In such a case it would be superb folly to make agriculture our absorbing care, to the neglect of the very purpose for which our country was created. But suppose our country were *mainly* created for agriculture, and provided with fertile soil, congenial climate and facilities for exporting our products to every part of the world, what would you think of our government, if it were to direct its efforts to the fostering of commerce and manufactures exclusively, while agriculture was neglected? Would you not say, that as a nation we have reached the summit of foolishness? But precisely such, (shall I say it? O! shame for boasted U. States!) the truth must be told, precisely such is a true but imperfect picture of our country, and of the movements of our government. Has Heaven made such a variety of salubrious climate, and such an immensity of the richest soil in the world, to be thus neglected, or thus frolicked away? How long will our people suffer themselves to be intoxicated by the political buzz and party spirit, which our politicians perpetually keep up, while they overlook—proudly forget—and even spurn to condescend to the true, the vital interest of the country. It is high time for us to rise and assert our rights. Let us vote down at the ballot box every puffed politician who would lead us away from our main interest, by filling our heads exclusively with Van Burenism, Clayism, Websterism, Whiteism, Harrisonism, Jacksonism, or any other mere partyism. Let us make them speak out and act out for the interest of our country or leave them at home, and select other lawgivers who *will* study this vital blood of our nation. It is vain to disguise any longer; to this point we must come at last. Our soil is every day washing from under us, and he is no patriot, no friend to the people, who would make them forgetful and drunk enough, on a mere ism, to frolick away their homes. It is high time, too, that the newspapers, which so pervert and poison the community, shall be commanded to stop their mad—their whirlwind—their baneful—their ruinous career. No man can study the sober interest of his country or his farm, if he reads them, while they are thus full of every thing that is slanderous, intoxicating and poisonous. Newspapers are very useful, so long as they are conducted with sober truth, and patient good sense; but when they are ever ready to sacrifice truth, philosophy and the vital interest of the country for mere party purposes, they are vile scourges to any nation. Let us then induce them to a season of sobering and reflection, till they become decent things. Let those who spend $20 a year for newspapers to heat their blood, curtail their reading of this kind, and spend $5 for agricultural papers that will make them prosperous, and their children—and their country, happy. But few men can in truth affirm that they have warrantee deeds to their farms while they confine their reading exclusively to party newspapers; because their soil will depreciate and wash away to the gulfs and oceans, and thus leave their deeds located upon sterile clay or sand. Then let us unite upon those measures which will save and improve our country, by bringing the individual and national mind to bear upon and develop all the natural advantages of the soil. The literature of our country needs remodeling. Though I am not old, I have spent most of my life, thus far, in teaching science, with a farm under my care. And I am ashamed, that so little of our boasted learning is practical—tamed—domesticated, and familiarized to the avocations of men. When the young man graduates with honor, he is then unfit for any occupation—he has still to learn his profession. Whereas, the college or university ought to fit young men at once for the occupations they are to follow. To promote these ends in agriculture, I propose to add $20 to the premiums offered by Mr. Solon Robinson and yourself for the publication of certain agricultural books, as described in the 8th number of the Cultivator. I also unite with Mr. Robinson in petitioning for an American Agricultural Society: and I join with him heartily in the proposed national petition to congress for the establishment of a National Agricultural School. And I would suggest that the Smithson bequest, lately received by the U. States, of £100,000, is the fund which should be set apart for that purpose, provided there is nothing in the *will* of the liberal Mr. Smithson to forbid it. Your ob't servant.

F. H. GORDON.

P. S. A convention of delegates from the societies of agriculture in our state takes place at Lebanon on Monday next.

Hoeing Wheat.

Hector, Tompkins co. N. Y. Nov. 27, 1838.

J. BUEL—Dear Sir—I have seen an article in your paper, headed "*Wheat on Clover Ley.*" I have been in the habit of growing wheat on clover ley, for nine or ten years past, and find great benefit resulting from it. The only difficulty that I find resulting from this mode of farming is, that on moist ground, after an unfavorable season for preparing my ground, grass has grown with my wheat in such quantities as to destroy say from two to four or five bushels of wheat to the acre. In 1837, I attempted to plough in about three acres of clover; at the time of ploughing, the season was dry, and the ground so hard, that when I finished ploughing it, I considered that about one-third of the ground was left unbroken by the plough; this ground was a part of the same field where I had corn then growing; I could not improve it any as a pasture; I ploughed this ground again after the middle of August; the season had continued dry, and the clover had not rotted, and my plough drew up the clover into heaps, like ploughing in straw, and when I had finished ploughing this time, much of the ground remained yet unbroken by the plough. I sowed this ground with wheat, I believe the 9th day of September; it was so badly prepared, that I think I should not have been disappointed if some part of it had not brought five bushels of wheat to the acre. Early the next spring, this wheat appeared to promise a good crop, but I soon found plenty of grass growing with it. I soon visited this wheat again and took along my hoe, and began to hoe up some of the grass sods, placing some on stones, and others in the place where I had taken them from, with the roots of the grass upward. I soon found that I did not disturb the wheat much, the roots of the wheat not being interwoven with the grass roots. I continued hoeing this wheat at intervals until I had hoed it twice over, and some part of it three times. After this wheat was fully grown, one of our best farmers, knowing that this ground was badly prepared, examined this wheat, and found it so clean from grass and so good a growth, that he gave it as his opinion, that if it should fill well, it would bring me twenty-five bushels to the acre, or nearly that. This wheat, like most of the wheat the past season, was not well filled, and was not kept separate from my other wheat, having no intention at the time of tilling of communicating this beyond my immediate neighborhood; I kept no accurate account of the time spent in hoeing this wheat, but concluded at the time, that it amounted to about one day, or a little more, on each acre; and at the time of harvesting, concluded that this ground had brought me, in return for hoeing it, about eight bushels of wheat to the acre. Although I cannot ascertain the exact benefit resulting from

hoeing this wheat, yet I feel confident that where my wheat has grass growing with it, it will pay me as good wages for hoeing it as my corn will.

I ought to have said that twenty-five bushels to the acre would have been as good a crop as I ever had on the same ground. SHELDON BASSETT.

Recipe for Curing Hams, Pork, &c.

Schenectady, 8th December, 1838.

Sir—In the November number of your Cultivator, is a recipe for salting pork and hams. If you are of opinion that the following mode is better, and that the public may profit from a knowledge of it, you may give it a place in the Cultivator.

I rub fine salt, with molasses and salt petre on hams, and pack them as close as I can in a cask. After a day or two, add pickle. In a cellar where it does not freeze, thirty days is long enough for hams not over 20 lbs. to lay in pickle. I use iron hooks, made of wire 1-4th of an inch thick, one end sharpened and turned short to hook into the ham; the other end turned wide, to hook over a pole of two or three inches diameter, and the hooks are six or seven inches long after they are made.

I hang up the hams a few days to dry, and then smoke them. Immediately after smoking, I hang them in the larder or store room, and slip over each ham a bag made for the purpose, of stout and close cotton or linen, and with a string tie it as tight as possible round the hook, and *above the ham*, so that a fly cannot enter or deposite her eggs on the ham, and the hams remain perfectly free from worms through the summer, or any length of time, as fine as when bagged. The looks are cheaper than strings, as they last an age, and the bags, if kept for this purpose, will serve for many years, if kept perfectly free from holes, &c.

If hams are not bagged till March or April, the flies may have deposited eggs on them, and they should be examined weekly to learn whether insects are on them, to be removed.

I object to the advice of packing hocks and jowls, with the hams, to save pickle, as it will not allow room for enough pickle to save the hams. Many years ago, I packed pieces of pork among the hams, to make it compact, and after the hams were smoked, found they had not taken sufficient salt, and were tainted so early as the month of March.

If hams are packed closely, in a cask of much size, there will not be too much room for pickle enough to save them.

I use pickle saturated with salt in all cases. When it is not convenient to use casks, hams will cure equally well, by mixing so much molasses (or sugar) with fine salt, and rubbing them together till like pretty dry sugar. Lay the hams, skin down, on a wide board, one end drooping. Rub on the flesh parts, the salt and salt petre thus prepared. After a day or two, the molasses will cause the salt to dissolve and run off; set a vessel under the lower end of the board to receive the pickle, which you can baste on the hams, after adding more salt to the hams, as it melts and runs off. Thirty days is long enough, when pickled as above. I have used an ounce of salt petre, and a half ounce to each ham of 16 or 20 lbs. and found no difference in the hams when used.

The observations of friend Comfort, in preparing and smoking his hams, are very judicious.

I think pork better without salt petre; it may be packed, skin down, each layer, covered with coarse salt, which is preferable to fine salt, except for rubbing on each piece of the pork before packing. After the cask is full, cold water filled to cover the pork, provided salt is put on, so as not to diminish that used in packing the pork: or pickle may be boiled, with some sugar or molasses, if sweet is preferred. Put some pearlash or salæratus in while boiling, as it causes the scum to rise, and clear the pickle, and the scum must be skimmed off.

If mice are in the room, they can crawl up the wall, over the ceiling, and descend to the ham. To prevent them from lodging on the ham, take a smooth and stiff paper, make a hole in the centre of the size of the wire, and slip it on the hook from which the ham is suspended, to form a cap above the bag. When the mouse passes down on the hook to the ham, he will slide off the paper to the floor, and must commence a new journey on the wall. Most respectfully,

DAVID TOMLINSON.

Spring Wheat and Ruta Baga in the Southwest.

Steubenville, (Ohio,) Dec. 5, 1838.

Mr. Buel—While I am writing, I will state to you one or two facts, which may be of some interest to you. The first is, that the ruta baga crop so far as I can learn, failed entirely in this neighborhood, the last season. The second is, that the Italian spring wheat with me was a very poor crop. I sowed something over two bushels of seed, fine looking grain, obtained from Mr. Hathaway, of Rome. It was sown in a field a part of which was in winter wheat. The spring wheat was sown on a rich sandy soil, (Ohio River Bottom,)—straw good—ears formed good size, but much blasted, and much of the grain shrivelled; whole crop 19½ bushels. The winter wheat adjoining 27½ bushels to the acre.

I am afraid that ruta baga and spring wheat will be an uncertain crop here on account of the warmth and dryness of our summers and falls. The last summer was very warm, and the latter part dry. Some seasons, I have no doubt, they will succeed well.

I intend to try beets, as a substitute for turnips.—Beets are as sure a crop as we have. Has the comparative value of a good crop of beets and turnips, in our country, ever been ascertained? If beets will afford as much nutriment as turnips, allowing both to be a good crop, I suspect very much we must adopt beets here. Yours very respectfully,

J. H. HALLOCK.

Experiments in Planting Potatoes.

J. Buel, Esq.—I procured of J. A. Thompson of Catskill, in May last, 9 Rohan potatoes, weighing one pound, gave a friend one of about the average size, planted the eight potatoes, two sets in a hill; the 8 potatoes planted 75 hills, producing 199½ lbs. being at the rate of 221 bushels to the acre: I will here mention that I have allowed 60 lbs. to the bushel, and 5,000 hills to the acre; the hills a little less than 3 feet asunder, each way.

I planted the same number of hills with the common white potato, 2 sets in a hill, which produced 186¼ lbs. being at the rate of 207 bushels to the acre, making a difference of 14 bushels to the acre, in round numbers, omitting fractions.

I will here remark, that it took 15 of the common potatoes to plant as many hills as the 8 Rohans planted; making a difference of nearly half in the quantity of seed.

Planted 20 hills of the common potato, with one potato in a hill, which produced 56¼ lbs. being at the rate of 235 bushels to the acre.

Planted 20 hills of the common potato, half a potato in each hill, which produced 50½ lbs. being 210 bushels to the acre.

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Planted 41 hills pink-eyes, with two potatoes in a hill, which produced 99½ lbs. being 202 bushels to the acre.

Planted 41 hills of pink-eyes, with one potato in a hill which produced 66¾ lbs. being 135 bushels to the acre.

Each variety of the above potatoes were as near of a size as I could judge; were all planted on the 26th of May, and all received the same treatment. The tops of the Rohans were green when the frost killed them, about the middle of October, and I am inclined to believe the potatoes had not got their growth, for I should think that there was not any that would weigh over one pound, although the land was in a high state of cultivation.

Should the above experiments with different varieties of potatoes, and different quantities of seed, induce any one of your many subscribers to try experiments, and ascertain the proper quantity of seed, I should consider myself abundantly paid for my trouble. SHERMAN BASSETT.

North-East, Dutchess Co. Nov. 15, 1838.

P. S. The tops of the common potato, with only two sets in a hill, sent out laterals, and shewed to all appearance nearly as many tops as the hills planted with the whole and half potato. S. B.

How to Eat your Potato and to Plant it.

New-Haven, Vt. Nov. 12th, 1838.

Mr. Buel—Sir—As the potato crop the present season has proved, generally, to be very light, perhaps it may be of use, to some at least, both to plant the potato and to eat it. I will just give you a sketch of an experiment I tried on raising potatoes from what we call the seed ends. While fattening my hogs last fall, (which was done principally on boiled potatoes,) I cut off the seed ends, or I took off from one-fourth to one-third of the potato, according to the shape of it—if long one-fourth is sufficient, if round more is necessary, that the piece taken off may be thick enough to retain moisture sufficient to preserve the chit through the winter. I continued cutting off the seed ends until I got twenty bushels of them, boiling the remainder of the potato for the hogs. When cold weather came on, I buried them on sandy soil, and let them remain until about planting time. I then took them out, planted in hills, each three feet apart, put one piece in a hill, generally, if very small, two. To satisfy myself that they were as good as the whole potato, I planted four rows of the whole potato, of good size, by the side of the seed ends. When I dug them, I found those from the seed ends to equal the other in measure, and to beat them in size. J. L. ELDREDGE.

The method of planting the eyes, and eating the potato, has long been practised in some parts of Europe. In this case the eyes are taken out with a scoop, somewhat resembling a salt spoon, though larger.—*Cond.*

Proper use of Clover Leys—Advantages of Agricultural Periodicals.

Gt. Barrington, Mass. Dec. 12, 1838.

Mr. Editor—I often hear the remark from intelligent men, that such and such soils are not very strong; that they require a great deal of nursing, otherwise are soon exhausted. For my own part I claim but little knowledge of the properties of soils for retaining fertility; but it does seem as though some labored under a very great misapprehension in this matter. Undoubtedly there are some soils so porous—so much exposed to the operations of heat and frost, wind and rain, that they are sooner exhausted of their fertility than those that are more compact and more adhesive. Still let there be a fair representation of facts, and I imagine there is not the difference in the properties of soils, in the same neighborhoods, that some suppose. For instance, in the valley of the Housatonic there are many farms that extend from the river to the adjacent hills, embracing three varieties of soil—the alluvial, which is sandy; the table land, which is a gravel; and the upland, or hilly, which, perhaps, may likewise be termed gravel, but of a different texture from the former, and is stony, and very rough and uneven. The first are natural meadows, and, when annually inundated, very productive of grass and requiring no manure. These are often permitted to remain undisturbed by the plough for years in succession, and, notwithstanding, yield a great burthen of hay: still, according to Professor Hitchcock's analysis, they contain but a very small proportion of *geine*, or vegetable food, less than most other soils in the county; the annual inundations restoring the fertility exhausted by continual cropping. The second variety, the table land, or gravelly, are light, dry, and requiring but little labor and strength of team to cultivate; and, in consequence, are exhausted by a succession of crops, without any regard to judicious rotation. But the rough, stony uplands and hills are more difficult to plough, and are allowed to remain in grass or pasture much longer, and thus recover their exhausted strength—hence they acquire the character of stronger soils. There are lands, in this vicinity, of the same character as those which require so much "nursing," which are, every year, improving in fertility and value, and it is a remarkable fact that these lands which are thus improving, were, a few years since, considered as very inferior and hardly worth the cost of cultivation. The proprietors of these lands, in some instances, have hit upon a course, which, if varied in some respects, appears to me the proper one for such lands. Almost uniformly clover, (with plaster,) is used as an ameliorating or enriching crop; yet the *land* is but little benefitted thereby. For as soon as the clover has attained to such a height that cattle can "get a good bite," while the herbage is tender, and before the stalk becomes in the least indurated, the cattle are turned upon it, and continued there as long as they can get a living. Then comes the turn for colts or sheep, which continue the spoliations till the field is a complete waste, and almost as barren of herbage as the Lybian desert. And now, perhaps, it is time to put in the plough for a winter crop; so the soil is turned over, and if ten bushels of rye, or fifteen or twenty bushels of oats per acre are obtained the proprietor is entirely satisfied.

Now, Sir, it strikes me that this is a mistaken policy. It is true that the stock that takes the first clip fares most daintily, and the land is somewhat benefitted by the manure left upon the surface; but, in the case of a dairy farm, where the cows are often driven a considerable distance from the pasture to the yard, there is a great waste; though many never think of that. But the root of the clover thus sheared of its lungs can never attain to much size; and as hardly a leaf or a stalk is turned under, the soil can be but little benefitted by the green crop; and if it does not degenerate it does not improve.

About three years since, in July, I called on a gentleman in the north part of this town, who makes use of clover "according to my notion" of the right way. He went with me over a considerable portion of his farm, and through fields which he intended to sow with wheat or rye. The soil was a gravel, and, by nature, not the most fertile. In these were horses, swine and cows, up to their eyes in clover in full bloom, and of most luxuriant growth: and I assure you it gave me pleasure of no ordinary degree to witness such a feast—a feast for the eye, for the brute and for the soil. I remarked, "Indeed Mr. T. your stock fare sumptuously." "Yes," was his reply, "and that is the way I manure my fields. When the clover is pretty well rolled down—I don't allow the cattle to *eat it all up*—I go in with my harrow and complete the levelling process by drawing it in the same direction that I plough, that in the latter operation

the herbage may be more completely buried." He likewise told me that it was by far the cheapest manure he could use, and that as long as he could produce clover in such abundance he would not draw manure if it were *given* him. This is carrying the principle to its fullest extent—further than I should approve: but it might have been his extravagant manner of showing his entire confidence in the system of cultivation, independent of other means of fertility. Still I very much doubt his willingness to *give away* his yard manure, or to part with it for the market price; and I did not observe that he "*summered*" any. He need not have told me that he obtained large crops—they were splendid—for his oats in adjoining fields proved it. By the way, oats are the crop he most cultivates. The land in this region is often ploughed in the fall, and only harrowed (but that *thoroughly*) in the spring.

These lands, thus managed, I have observed are rapidly increasing in value and productiveness. 'Tis strange—surpassing strange—that some people have such short vision that they can not see the simple causes of their neighbors' thrift! There is no necromancy—no *exclusive* knowledge in the process. And here I would allude to the benefits of agricultural periodicals: those who read, observe and practise are the most enterprising, the most successful and the most valued citizens. 'Tis they who bring wealth into a community; 'tis they who make a community prosperous; and 'tis among such that the advantages of society and education are most amply enjoyed. It is by the perusal of agricultural periodicals that I have acquired what little I possess of taste for agriculture, and, in a great measure, my knowledge of the art; though I have but recently commenced connecting practice with theory.

But I have trespassed far more upon your time and patience than I intended. The hope that the hints I have thrown out may be of service somewhere, has been the inducement to offer them for your consideration, and for publication if deemed worthy of notice. Yours respectfully,

F. WHITING.

American Society for the Diffusion of Useful Knowledge.

Concord, N. H. Nov. 24, 1838.

Hon. J. BUEL—Dear Sir—I am one of your constant readers, and am ready to bear testimony to the great value of the Cultivator to farmers. No farmer should be without a copy of it on his table, and he who hesitates on account of the small price, has yet a lesson to learn in the way of economy. Although I have the care of a large farm, I find some time to read—and a part of my time I devote to public service.

My favorite subjects are AGRICULTURE and EDUCATION, and as a father and citizen I am fully persuaded, that the moral character of our people will not only depend upon the elevation of *Common Schools*, but on the nature of the pursuits which are recommended to our children, after they shall have become free and prepared to act for themselves. I have confidence in the integrity of *Farmers*. I believe that the cultivation of the soil is eminently calculated to inspire the higher sentiments of our nature, and to strengthen and increase the devotional spirit. I would say of the farmer what has been said of the astronomer—*an undevout farmer is mad.*

I believe, dear sir, that our institutions, in the hands of farmers, *are safe*. As much cannot be said of any other profession. I do not speak this in disparagement to other vocations—far from it: I mean simply, that it is the duty of all to lead young men out of large towns to the country, to cultivate that soil which is endowed with an amount of wealth not to be counted, and which is capable of sending forth the tens of thousands of beauties which adorn all external nature, and which, in its diversified productions, sustains the whole world.

But I digress—my first object in writing you was, to notice an article in the Cultivator of this month on "*Common School Libraries.*" Your remarks upon the importance of such libraries are just, and show, in my opinion, that you are able to do much good in exercising you influence in their behalf. Two or three months since, I saw a number of the *Charlestown Aurora*—or rather I believe they call it the *Bunker-Hill Aurora*—in which the editor makes an attack on the "*American Society for the Diffusion of Useful Knowledge.*" It was stated, that the members of that society, or most of them, were elected without their knowledge or consent—and that the whole matter was managed by a few individuals—who cared for nothing but for the profits of the concern. I have no objection to seeing my neighbors doing a good profitable business, "not I,"—but I like to see profession and practice agree. Believing that the plan of school libraries was one fraught with incalculable blessings to the rising generation, I took pains to ascertain the facts of the case, so far as my means of communication would allow me. I found that the Bunker Hill paper was right in its conjectures, and to my pain, I found that it did not tell half the story.

The amount of it is, that the society was planned by Mr. Abbott the secretary, and more as a speculation than any thing else. I found that many of the individuals printed as members, were made members without their knowledge or consent—and some of my friends are of the number. I found that the library of fifty volumes, was made up of the *old volumes* of the "Family Library," and the "Girls' and Boys' Library," printed from the old plates, and the only variation was in the binding. These series were published by Messrs. Harpers, of New-York.

Many of the volumes are excellent works in their way, but most of them are not adapted to the capacities of the young. A particular examination must convince you of the truth of this ascertion. Besides, the committee of the society consented to make a statement, which is little less than downright deception. Under the head of

"EXECUTION OF THE PLAN,"

it is stated, "all the arrangements for carrying the design into execution, are in a state of forwardness, so far as they can be, before the necessary funds are secured. It is estimated that $15,000 are required to manufacture the stereotype plates for 50 volumes," &c.

Now, the very volumes offered, are printed from plates that have been used for several years, and on examination of some of the volumes, you will find that they have *two title pages*—one 1835 or 1836 and another 1838—proving that they were printed two or three years ago!!! Much more might be said, but I am no writer, and must beg that you will excuse the matter for yourself. If publishers wish to get off their old stock, let them say so: but in the name of heaven, let not the friends of education come forward with any plans of deception. As yet New-Hampshire has done but little to advance education—but we have made our best plans to be proposed at the next session of our state government. Old Massachusetts is marching forward boldly and grandly in the great cause. I am quite pleased to hear, that the board of education of that state, have decided to have prepared two series of 50 volumes each, adapted to children of different ages, to be edited by some of the most distinguished men of our country. This is as it ought to be—and I can but say to the disinterested and philanthropic gentlemen of that honorable board *God speed.* I am respectfully yours, S. H.

Hints in Rural Economy.

From a Female Correspondent.

Mr. BUEL—I have just been reading in the Cultivator an inquiry as to the cause of pork shrinking and swelling in the pot, and have a few remarks to offer in reply. My father-in-law, old 'Squire S——, you know, had been a great farmer, and not an unobserving one. He accounted for it in this way, saying, that any man of observation, who fed his own hogs when fattening, would see, that during the increase of the moon, hogs ate, at least one-third more, than in the decrease; that they should be killed, when thriving, *just before full moon*; that in the old of the moon, when they eat less, their vessels would be comparitively empty, which caused the shrinkage in the pot. Whether his philosophy is correct, I am not able to say; but the fact is indisputable as to the different stages of the moon.

I will mention one or two more discoveries, made by myself, which *may* be of use, if you think them worth inserting. During warm weather in dog-days, the best house-keepers, who have but a cow or two, and are obliged to let their cream stand two or three days to collect enough to churn, are often troubled with having their milk or cream separate, and a *whey* settle at the bottom of the vessel, which makes the butter a long time in coming. To correct this evil, take a lump of pearlash as large as a walnut, to six or eight quarts of cream, dissolve it in a pint of cold water; by stirring that into the cream before you put it into the churn, it becomes thick, like cream in the fall, and the butter will come very soon, and be as yellow and hard as in autumn.

In raising silk-worms, I experienced a difficulty which I hear nothing said of, but with me was the greatest I met with; indeed the only one; which was, to find something they *liked* to wind their cocoons on. I tried split sticks, dried twigs of every kind, but they would run from them all, until I got some fine *thrifty* sprouts of the Lombardy poplar, which I suspended over them, the ends of the branches just touching their tray. They immediately began to go up, and as the leaves which were long, began to wilt and curl, they formed little envelopes where they soon began to wind, and when taken down there were several branches where *every* leaf contained a fine *large* cocoon. There were several worms which had commenced spinning on the side of the tray, that left them, and took to the leaves, and not a single one attempted to stray, after the poplars were hung up.

Mode of Improving Peat Bogs.

To JUDGE BUEL—Sir—In a recently published account of the proceedings of the eighth meeting of the British Association for the advancement of science, I find the following notice which may be interesting to some of the numerous readers of the Cultivator.

"Dr. Adams communicated some observations on Peat Bogs, the purport of which, we believe, was, that by burning off the surface and sprinkling the subsoil with sulphuric acid, it would become fertile, and that the surface moss, if removed to the farm-yard, and also sprinkled with sulphuric acid, would become excellent manure. In reply to a question by Prof. Buckland, Dr. Adams said, that in some parts of Ireland it was the custom to burn off the spongy part, sprinkle the acid over the ground, and it became prolific. The moss was also prepared in the farm-yard. Major Portlock said he was aware of the practice, but believed it was done, not only for the purpose of converting the peat into manure, but also to correct some deleterious quality in the peat. Prof. Sedgwick suggested that something should be distinctly ascertained, and communicated to the Association at their next meeting, for the subject was one of importance. The principle, no doubt, was, as Major Portlock had stated it, to destroy bad vegetation by means of poison. It must be recollected, however, that the peat moss was of the utmost value to the poor peasantry of Ireland. Mr. Bates said that he had tried a similar experiment thirty years ago, and in the first year the peice of ground was rendered very prolific. But he tried it the next year and did more mischief than he had in the first instance done good."

It is well known that many of the salts, of which sulphuric acid, or oil of vitriol, forms one of the constituents, are highly useful as manures. May not this in some cases, be owing to the acid which they contain? Would not it be worth while to determine, by a series of experiments, the effect of a *very* dilute oil of vitriol upon soils of different kinds? B.

The Season in Indiana.

Lake C. H. Ind. Nov. 25th, 1838.

It is worthy of note that the drouth still continues in this section of the country to a distressing degree. The old adage, that, "winter never with rigour sets in, till the swamps with water are fill'd in," is completely falsified. The general character of the weather eight months past has been thus:—April cold and dry; May warm, without a single shower; June hot, with two or three days about the 10th, of excessive rains and scalding hot; July and August constant sunshine and south wind that engendered much sickness; September and October continued dry sunshine, with two or three small showers and as many drizzly days, but not rain enough to prevent a complete exhaustion of springs, ponds, streams and marshes, &c.

November, the first days, warm and pleasant, Sunday night the 4th a snow fell about three inches—the 5th, 6th and 7th misty, and snow melted and came off excessive cold, destroying great quantities of potatoes and turnips; then moderately cold until the middle of the month, when the cold increased, and Sunday the 18th was a most severe cold day, freezing the ponds over, strong enough to bear a man. Since then it has been moderate, but now, the 25th, is again very cold. Cattle have required feeding all the month, and in many places water for stock is very difficult to be had.

This has been a season of suffering in the west.

Yours &c. SOLON ROBINSON.

Barilla Ashes—Drill Barrows.

"The ashes from Barilla, are for the most part stronger than any other, and if the same quantity of them were laid upon land as is commonly done with wood ashes, they would burn and destroy the crop. The ashes from the Barilla is a strong rich manure, and sold at 5*s.* per cart load. This excellent manure was first used by the Flemings with great success. Two loads of these ashes are sufficient for an acre of arable land. They should be laid on the ground when the weather is inclined to be wet, in order that the rain may more easily dissolve and wash them in.

"They are generally made into composts with earth and well fermented dung; in the proportion of two loads of dung, to one of earth; the ashes are then added in the quantity of one load to ten of this mixture, turning over, and incorporating the whole completely. Laid upon grass-land in the end of autumn, this manure produces a deep verdure during the winter, and an early vigorous vegetation in the spring; it is therefore particularly calculated for cold wet pastures. One writer remarks that he never uses it alone on account of its hot burning quality; his method is to make a large heap, two parts of earth to one of dung plac-

hoeing this wheat, yet I feel confident that where my wheat has grass growing with it, it will pay me as good wages for hoeing it as my corn will.

I ought to have said that twenty-five bushels to the acre would have been as good a crop as I ever had on the same ground. SHELDON BASSETT.

Recipe for Curing Hams, Pork, &c.

Schenectady, 8th December, 1838.

Sir—In the November number of your Cultivator, is a recipe for salting pork and hams. If you are of opinion that the following mode is better, and that the public may profit from a knowledge of it, you may give it a place in the Cultivator.

I rub fine salt, with molasses and salt petre on hams, and pack them as close as I can in a cask. After a day or two, add pickle. In a cellar where it does not freeze, thirty days is long enough for hams not over 20 lbs. to lay in pickle. I use iron hooks, made of wire 1-4th of an inch thick, one end sharpened and turned short to hook into the ham; the other end turned wide, to hook over a pole of two or three inches diameter, and the hooks are six or seven inches long after they are made.

I hang up the hams a few days to dry, and then smoke them. Immediately after smoking, I hang them in the larder or store room, and slip over each ham a bag made for the purpose, of stout and close cotton or linen, and with a string tie it as tight as possible round the hook, and *above the ham*, so that a fly cannot enter or deposite her eggs on the ham, and the hams remain perfectly free from worms through the summer, or any length of time, as fine as when bagged. The looks are cheaper than strings, as they last an age, and the bags, if kept for this purpose, will serve for many years, if kept perfectly free from holes, &c.

If hams are not bagged till March or April, the flies may have deposited eggs on them, and they should be examined weekly to learn whether insects are on them, to be removed.

I object to the advice of packing hocks and jowls, with the hams, to save pickle, as it will not allow room for enough pickle to save the hams. Many years ago, I packed pieces of pork among the hams, to make it compact, and after the hams were smoked, found they had not taken sufficient salt, and were tainted so early as the month of March.

If hams are packed closely, in a cask of much size, there will not be too much room for pickle enough to save them.

I use pickle saturated with salt in all cases. When it is not convenient to use casks, hams will cure equally well, by mixing so much molasses (or sugar) with fine salt, and rubbing them together till like pretty dry sugar. Lay the hams, skin down, on a wide board, one end drooping. Rub on the flesh parts, the salt and salt petre thus prepared. After a day or two, the molasses will cause the salt to dissolve and run off; set a vessel under the lower end of the board to receive the pickle, which you can baste on the hams, after adding more salt to the hams, as it melts and runs off. Thirty days is long enough, when pickled as above. I have used an ounce of salt petre, and a half ounce to each ham of 16 or 20 lbs. and found no difference in the hams when used.

The observations of friend Comfort. in preparing and smoking his hams, are very judicious.

I think pork better without salt petre; it may be packed, skin down, each layer, covered with coarse salt, which is preferable to fine salt, except for rubbing on each piece of the pork before packing. After the cask is full, cold water filled to cover the pork, provided salt is put on, so as not to diminish that used in packing the pork: or pickle may be boiled, with some sugar or molasses, if sweet is preferred. Put some pearlash or salæratus in while boiling, as it causes the scum to rise, and clear the pickle, and the scum must be skimmed off.

If mice are in the room, they can crawl up the wall, over the ceiling, and descend to the ham. To prevent them from lodging on the ham, take a smooth and stiff paper, make a hole in the centre of the size of the wire, and slip it on the hook from which the ham is suspended, to form a cap above the bag. When the mouse passes down on the hook to the ham, he will slide off the paper to the floor. and must commence a new journey on the wall. Most respectfully,

DAVID TOMLINSON.

Spring Wheat and Ruta Baga in the Southwest.

Steubenville, (Ohio,) Dec. 5, 1838.

Mr. Buel—While I am writing, I will state to you one or two facts, which may be of some interest to you. The first is, that the ruta baga crop so far as I can learn, failed entirely in this neighborhood, the last season. The second is, that the Italian spring wheat with me was a very poor crop. I sowed something over two bushels of seed, fine looking grain, obtained from Mr. Hathaway, of Rome. It was sown in a field a part of which was in winter wheat. The spring wheat was sown on a rich sandy soil, (Ohio River Bottom,)—straw good—ears formed good size, but much blasted, and much of the grain shrivelled; whole crop 19½ bushels. The winter wheat adjoining 27½ bushels to the acre.

I am afraid that ruta baga and spring wheat will be an uncertain crop here on account of the warmth and dryness of our summers and falls. The last summer was very warm, and the latter part dry. Some seasons, I have no doubt, they will succeed well.

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Each variety of the above potatoes were as near of a size as I could judge; were all planted on the 26th of May, and all received the same treatment. The tops of the Rohans were green when the frost killed them, about the middle of October, and I am inclined to believe the potatoes had not got their growth, for I should think that there was not any that would weigh over one pound, although the land was in a high state of cultivation.

Should the above experiments with different varieties of potatoes, and different quantities of seed, induce any one of your many subscribers to try experiments, and ascertain the proper quantity of seed, I should consider myself abundantly paid for my trouble. SHERMAN BASSETT.

North-East, Dutchess Co. Nov. 15, 1838.

P. S. The tops of the common potato, with only two sets in a hill, sent out laterals, and shewed to all appearance nearly as many tops as the hills planted with the whole and half potato. S. B.

How to Eat your Potato and to Plant it.

New-Haven, Vt. Nov. 12th, 1838.

Mr. Buel—Sir—As the potato crop the present season has proved, generally, to be very light, perhaps it may be of use, to some at least, both to plant the potato and to eat it. I will just give you a sketch of an experiment I tried on raising potatoes from what we call the seed ends. While fattening my hogs last fall, (which was done principally on boiled potatoes,) I cut off the seed ends, or I took off from one-fourth to one-third of the potato, according to the shape of it—if long one-fourth is sufficient, if round more is necessary, that the piece taken off may be thick enough to retain moisture sufficient to preserve the chit through the winter. I continued cutting off the seed ends until I got twenty bushels of them, boiling the remainder of the potato for the hogs. When cold weather came on, I buried them on sandy soil, and let them remain until about planting time. I then took them out, planted in hills, each three feet apart, put one piece in a hill, generally, if very small, two. To satisfy myself that they were as good as the whole potato, I planted four rows of the whole potato, of good size, by the side of the seed ends. When I dug them, I found those from the seed ends to equal the other in measure, and to beat them in size. J. L. ELDREDGE.

The method of planting the eyes, and eating the potato, has long been practised in some parts of Europe. In this case the eyes are taken out with a scoop, somewhat resembling a salt spoon, though larger.—*Cond.*

Proper use of Clover Leys—Advantages of Agricultural Periodicals.

Gt. Barrington, Mass. Dec. 12, 1838.

Mr. Editor—I often hear the remark from intelligent men, that such and such soils are not very strong; that they require a great deal of nursing, otherwise are soon exhausted. For my own part I claim but little knowledge of the properties of soils for retaining fertility; but it does seem as though some labored under a very great misapprehension in this matter. Undoubtedly there are some soils so porous—so much exposed to the operations of heat and frost, wind and rain, that they are sooner exhausted of their fertility than those that are more compact and more adhesive. Still let there be a fair representation of facts, and I imagine there is not the difference in the properties of soils, in the same neighborhoods, that some suppose. For instance, in the valley of the Housatonic there are many farms that extend from the river to the adjacent hills, embracing three varieties of soil—the alluvial, which is sandy; the table land, which is a gravel; and the upland, or hilly, which, perhaps, may likewise be termed gravel, but of a different texture from the former, and is stony, and very rough and uneven. The first are natural meadows, and, when annually inundated, very productive of grass and requiring no manure. These are often permitted to remain undisturbed by the plough for years in succession, and, notwithstanding, yield a great burthen of hay: still, according to Professor Hitchcock's analysis, they contain but a very small proportion of *geine*, or vegetable food, less than most other soils in the county; the annual inundations restoring the fertility exhausted by continual cropping. The second variety, the table land, or gravelly, are light, dry, and requiring but little labor and strength of team to cultivate; and, in consequence, are exhausted by a succession of crops, without any regard to judicious rotation. But the rough, stony uplands and hills are more difficult to plough, and are allowed to remain in grass or pasture much longer, and thus recover their exhausted strength—hence they acquire the character of stronger soils. There are lands, in this vicinity, of the same character as those which require so much "nursing," which are, every year, improving in fertility and value, and it is a remarkable fact that these lands which are thus improving, were, a few years since, considered as very inferior and hardly worth the cost of cultivation. The proprietors of these lands, in some instances, have hit upon a course, which, if varied in some respects, appears to me the proper one for such lands. Almost uniformly clover, (with plaster,) is used as an ameliorating or enriching crop; yet the *land* is but little benefitted thereby. For as soon as the clover has attained to such a height that cattle can "get a good bite," while the herbage is tender, and before the stalk becomes in the least indurated, the cattle are turned upon it, and continued there as long as they can get a living. Then comes the turn for colts or sheep, which continue the spoliations till the field is a complete waste, and almost as barren of herbage as the Lybian desert. And now, perhaps, it is time to put in the plough for a winter crop; so the soil is turned over, and if ten bushels of rye, or fifteen or twenty bushels of oats per acre are obtained the proprietor is entirely satisfied.

Now, Sir, it strikes me that this is a mistaken policy. It is true that the stock that takes the first clip fares most daintily, and the land is somewhat benefitted by the manure left upon the surface; but, in the case of a dairy farm, where the cows are often driven a considerable distance from the pasture to the yard, there is a great waste; though many never think of that. But the root of the clover thus sheared of its lungs can never attain to much size; and as hardly a leaf or a stalk is turned under, the soil can be but little benefitted by the green crop; and if it does not degenerate it does not improve.

About three years since, in July, I called on a gentleman in the north part of this town, who makes use of clover "according to my notion" of the right way. He went with me over a considerable portion of his farm, and through fields which he intended to sow with wheat or rye. The soil was a gravel, and, by nature, not the most fertile. In these were horses, swine and cows, up to their eyes in clover in full bloom, and of most luxuriant growth: and I assure you it gave me pleasure of no ordinary degree to witness such a feast—a feast for the eye, for the brute and for the soil. I remarked, "Indeed Mr. T. your stock fare sumptuously." "Yes," was his reply, "and that is the way I manure my fields. When the clover is pretty well rolled down—I don't allow the cattle to *eat it all up*—I go in with my harrow and complete the levelling process by drawing it in the same direction that I plough, that in the latter operation

the herbage may be more completely buried." He likewise told me that it was by far the cheapest manure he could use, and that as long as he could produce clover in such abundance he would not draw manure if it were *given* him. This is carrying the principle to its fullest extent—further than I should approve: but it might have been his extravagant manner of showing his entire confidence in the system of cultivation, independent of other means of fertility. Still I very much doubt his willingness to *give away* his yard manure, or to part with it for the market price; and I did not observe that he "*summered*" any. He need not have told me that he obtained large crops—they were splendid—for his oats in adjoining fields proved it. By the way, oats are the crop he most cultivates. The land in this region is often ploughed in the fall, and only harrowed (but that *thoroughly*) in the spring.

These lands, thus managed, I have observed are rapidly increasing in value and productiveness. 'Tis strange—surpassing strange—that some people have such short vision that they can not see the simple causes of their neighbors' thrift! There is no necromancy—no *exclusive* knowledge in the process. And here I would allude to the benefits of agricultural periodicals: those who read, observe and practise are the most enterprising, the most successful and the most valued citizens. 'Tis they who bring wealth into a community; 'tis they who make a community prosperous; and 'tis among such that the advantages of society and education are most amply enjoyed. It is by the perusal of agricultural periodicals that I have acquired what little I possess of taste for agriculture, and, in a great measure, my knowledge of the art; though I have but recently commenced connecting practice with theory.

But I have trespassed far more upon your time and patience than I intended. The hope that the hints I have thrown out may be of service somewhere, has been the inducement to offer them for your consideration, and for publication if deemed worthy of notice. Yours respectfully,

F. WHITING.

American Society for the Diffusion of Useful Knowledge.

Concord, N. H. Nov. 24, 1838.

Hon. J. BUEL—Dear Sir—I am one of your constant readers, and am ready to bear testimony to the great value of the Cultivator to farmers. No farmer should be without a copy of it on his table, and he who hesitates on account of the small price, has yet a lesson to learn in the way of economy. Although I have the care of a large farm, I find some time to read—and a part of my time I devote to public service.

My favorite subjects are AGRICULTURE and EDUCATION, and as a father and citizen I am fully persuaded, that the moral character of our people will not only depend upon the elevation of *Common Schools*, but on the nature of the pursuits which are recommended to our children, after they shall have become free and prepared to act for themselves. I have confidence in the integrity of *Farmers*. I believe that the cultivation of the soil is eminently calculated to inspire the higher sentiments of our nature, and to strengthen and increase the devotional spirit. I would say of the farmer what has been said of the astronomer—*an undevout farmer is mad.*

I believe, dear sir, that our institutions, in the hands of farmers, *are safe*. As much cannot be said of any other profession. I do not speak this in disparagement to other vocations—far from it: I mean simply, that it is the duty of all to lead young men out of large towns to the country, to cultivate that soil which is endowed with an amount of wealth not to be counted, and which is capable of sending forth the tens of thousands of beauties which adorn all external nature, and which, in its diversified productions, sustains the whole world.

But I digress—my first object in writing you was, to notice an article in the Cultivator of this month on "*Common School Libraries.*" Your remarks upon the importance of such libraries are just, and show, in my opinion, that you are able to do much good in exercising you influence in their behalf. Two or three months since, I saw a number of the *Charlestown Aurora*—or rather I believe they call it the *Bunker-Hill Aurora*—in which the editor makes an attack on the "*American Society for the Diffusion of Useful Knowledge.*" It was stated, that the members of that society, or most of them, were elected without their knowledge or consent—and that the whole matter was managed by a few individuals—who cared for nothing but for the profits of the concern. I have no objection to seeing my neighbors doing a good profitable business, "not I,"—but I like to see profession and practice agree. Believing that the plan of school libraries was one fraught with incalculable blessings to the rising generation, I took pains to ascertain the facts of the case, so far as my means of communication would allow me. I found that the Bunker Hill paper was right in its conjectures, and to my pain, I found that it did not tell half the story.

The amount of it is, that the society was planned by Mr. Abbott the secretary, and more as a speculation than any thing else. I found that many of the individuals printed as members, were made members without their knowledge or consent—and some of my friends are of the number. I found that the library of fifty volumes, was made up of the *old volumes* of the "Family Library," and the "Girls' and Boys' Library," printed from the old plates, and the only variation was in the binding. These series were published by Messrs. Harpers, of New-York.

Many of the volumes are excellent works in their way, but most of them are not adapted to the capacities of the young. A particular examination must convince you of the truth of this ascertion. Besides, the committee of the society consented to make a statement, which is little less than downright deception. Under the head of

"EXECUTION OF THE PLAN,"

it is stated, "all the arrangements for carrying the design into execution, are in a state of forwardness, so far as they can be, before the necessary funds are secured. It is estimated that $15,000 are required to manufacture the stereotype plates for 50 volumes," &c.

Now, the very volumes offered, are printed from plates that have been used for several years, and on examination of some of the volumes, you will find that they have *two title pages*—one 1835 or 1836 and another 1838—proving that they were printed two or three years ago!!! Much more might be said, but I am no writer, and must beg that you will excuse the matter for yourself. If publishers wish to get off their old stock, let them say so: but in the name of heaven, let not the friends of education come forward with any plans of deception. As yet New-Hampshire has done but little to advance education—but we have made our best plans to be proposed at the next session of our state government. Old Massachusetts is marching forward boldly and grandly in the great cause. I am quite pleased to hear, that the board of education of that state, have decided to have prepared two series of 50 volumes each, adapted to children of different ages, to be edited by some of the most distinguished men of our country. This is as it ought to be—and I can but say to the disinterested and philanthropic gentlemen of that honorable board *God speed.* I am respectfully yours, S. H.

Hints in Rural Economy.

From a Female Correspondent.

Mr. BUEL—I have just been reading in the Cultivator an inquiry as to the cause of pork shrinking and swelling in the pot, and have a few remarks to offer in reply. My father-in-law, old 'Squire S——, you know, had been a great farmer, and not an unobserving one. He accounted for it in this way, saying, that any man of observation, who fed his own hogs when fattening, would see, that during the increase of the moon, hogs ate, at least one-third more, than in the decrease; that they should be killed, when thriving, *just before full moon*; that in the old of the moon, when they eat less, their vessels would be comparitively empty, which caused the shrinkage in the pot. Whether his philosophy is correct, I am not able to say; but the fact is indisputable as to the different stages of the moon.

I will mention one or two more discoveries, made by myself, which *may* be of use, if you think them worth inserting. During warm weather in dog-days, the best house-keepers, who have but a cow or two, and are obliged to let their cream stand two or three days to collect enough to churn, are often troubled with having their milk or cream separate, and a *whey* settle at the bottom of the vessel, which makes the butter a long time in coming. To correct this evil, take a lump of pearlash as large as a walnut, to six or eight quarts of cream, dissolve it in a pint of cold water; by stirring that into the cream before you put it into the churn, it becomes thick, like cream in the fall, and the butter will come very soon, and be as yellow and hard as in autumn.

In raising silk-worms, I experienced a difficulty which I hear nothing said of, but with me was the greatest I met with; indeed the only one; which was, to find something they *liked* to wind their cocoons on. I tried split sticks, dried twigs of every kind, but they would run from them all, until I got some fine *thrifty* sprouts of the Lombardy poplar, which I suspended over them, the ends of the branches just touching their tray. They immediately began to go up, and as the leaves which were long, began to wilt and curl, they formed little envelopes where they soon began to wind, and when taken down there were several branches where *every* leaf contained a fine *large* cocoon. There were several worms which had commenced spinning on the side of the tray, that left them, and took to the leaves, and not a single one attempted to stray, after the poplars were hung up.

Mode of Improving Peat Bogs.

To JUDGE BUEL—Sir—In a recently published account of the proceedings of the eighth meeting of the British Association for the advancement of science, I find the following notice which may be interesting to some of the numerous readers of the Cultivator.

"Dr. Adams communicated some observations on Peat Bogs, the purport of which, we believe, was, that by burning off the surface and sprinkling the subsoil with sulphuric acid, it would become fertile, and that the surface moss, if removed to the farmyard, and also sprinkled with sulphuric acid, would become excellent manure. In reply to a question by Prof. Buckland, Dr. Adams said, that in some parts of Ireland it was the custom to burn off the spongy part, sprinkle the acid over the ground, and it became prolific. The moss was also prepared in the farmyard. Major Portlock said he was aware of the practice, but believed it was done, not only for the purpose of converting the peat into manure, but also to correct some deleterious quality in the peat. Prof. Sedgwick suggested that something should be distinctly ascertained, and communicated to the Association at their next meeting, for the subject was one of importance. The principle, no doubt, was, as Major Portlock had stated it, to destroy bad vegetation by means of poison. It must be recollected, however, that the peat moss was of the utmost value to the poor peasantry of Ireland. Mr. Bates said that he had tried a similar experiment thirty years ago, and in the first year the peice of ground was rendered very prolific. But he tried it the next year and did more mischief than he had in the first instance done good."

It is well known that many of the salts, of which sulphuric acid, or oil of vitriol, forms one of the constituents, are highly useful as manures. May not this in some cases, be owing to the acid which they contain? Would not it be worth while to determine, by a series of experiments, the effect of a *very* dilute oil of vitriol upon soils of different kinds? B.

The Season in Indiana.

Lake C. H. Ind. Nov. 25th, 1838.

It is worthy of note that the drouth still continues in this section of the country to a distressing degree. The old adage, that, "winter never with rigour sets in, till the swamps with water are fill'd in," is completely falsified. The general character of the weather eight months past has been thus:—April cold and dry; May warm, without a single shower; June hot, with two or three days about the 10th, of excessive rains and scalding hot; July and August constant sunshine and south wind that engendered much sickness; September and October continued dry sunshine, with two or three small showers and as many drizzly days, but not rain enough to prevent a complete exhaustion of springs, ponds, streams and marshes, &c.

November, the first days, warm and pleasant, Sunday night the 4th a snow fell about three inches—the 5th, 6th and 7th misty, and snow melted and came off excessive cold, destroying great quantities of potatoes and turnips; then moderately cold until the middle of the month, when the cold increased, and Sunday the 18th was a most severe cold day, freezing the ponds over, strong enough to bear a man. Since then it has been moderate, but now, the 25th, is again very cold. Cattle have required feeding all the month, and in many places water for stock is very difficult to be had.

This has been a season of suffering in the west.

Yours &c. SOLON ROBINSON.

Barilla Ashes—Drill Barrows.

"The ashes from Barilla, are for the most part stronger than any other, and if the same quantity of them were laid upon land as is commonly done with wood ashes, they would burn and destroy the crop. The ashes from the Barilla is a strong rich manure, and sold at 5*s.* per cart load. This excellent manure was first used by the Flemings with great success. Two loads of these ashes are sufficient for an acre of arable land. They should be laid on the ground when the weather is inclined to be wet, in order that the rain may more easily dissolve and wash them in.

"They are generally made into composts with earth and well fermented dung; in the proportion of two loads of dung, to one of earth; the ashes are then added in the quantity of one load to ten of this mixture, turning over, and incorporating the whole completely. Laid upon grass-land in the end of autumn, this manure produces a deep verdure during the winter, and an early vigorous vegetation in the spring; it is therefore particularly calculated for cold wet pastures. One writer remarks that he never uses it alone on account of its hot burning quality; his method is to make a large heap, two parts of earth to one of dung plac-

ed in alternate layers to rot. After this has undergone a strong fermentation, he causes the whole heap to be turned and well mixed, leaving it for some time to mellow, then mix one load of ashes to ten loads of compost, leaving the whole to mellow together.—About the latter end of September he causes about ten loads of this compost to be laid in little heaps on each acre of land intended to be sown with wheat; it is immediately ploughed in with the seed. He has also tried this manure on lighter lands, and found it to answer well, provided it has lain a considerable time in the compost heap to mellow, and lessen its natural heat and causticity; but it agrees best by far with clayey soils, and on such is worthy of being recommended as an excellent dressing for wheat crops. As soap makers use much lime to deprive the alkaline salts of their fixed air, the addition of lime to the ashes is unnecessary."—*Complete Farmer, English Edition.*

The reading of this account of Barilla ashes encouraged me to use them to a considerable extent. They have been tried by several of my neighbors on wheat and rye fallow, with good effects on the grain crop, but more particularly so on the succeeding grass.

In all the *drill-barrows* that I have noticed (except my own and those made after them,) the rollers for pressing in the seeds have been *convex*. Mine are made *concave*, about one inch deep in a breadth of three inches. This in my opinion has the effect to press the earth around the seeds as well as upon the top of them. Besides if heavy rains soon fall, after planting, it has seemed to me better for the water to stand and settle a little off, rather than immediately upon the seeds. ROB. WHITE, Jr.

Shewsbury, N. J. December, 1838.

Farming in North Carolina.

Mocksville, Davie county, N. C. Nov. 19th, 1838.

Judge Buel—Dear Sir—Having lately become a subscriber to the Cultivator, (the first in this county I think,) I am much pleased with the character of the work; it certainly contains a great deal of very useful information for the farmer, such as I felt the want of myself, and I know it is the same case with my neighbors, as I don't know of a single agricultural paper that is taken in this county. The zeal with which agricultural schools are urged, and legislative aid invoked, is certainly commendable, as it appears to me that that course will be the surest way of introducing the new system, as it is very hard to get men advanced in years and fixed habits to change. Our system of farming in this state, is certainly very bad, and I can see it more plainly since I read the Cultivator; (I have the back volumes.) To speak in general terms, we are carrying on the "skinning" system in high perfection. Our farms are mostly divided into "meadow and plough lands." As to permanent pasture land, we have very little; our cattle, sheep and hogs mostly run at large in the woods and old fields in summer. We alternate corn with small grain and small grain with corn; pasture our lands every opportunity, as soon as the crop is off, until we are ready to put another on. Clover is scarcely known here as a field crop, and as to stocking down our plough lands with grass seeds for mowing or pasture, the practice is not known here. Root culture is not attended to, but for the table. I have some doubts whether our climate is not too hot to pursue it to advantage. We go over a great many acres, and get few bushels; feed our stock from stacks in the fields, and "summer yard" what little manure is accidentally made about the barn and stables, and there is very little improvement in the breeds of our stock.—To all of which, however, there are some exceptions, particularly in this county; we have some enterprizing men who are departing from the beaten track, and endeavoring to improve their lands and stock; but so far as I am able to judge, we all lack knowledge as to the "why and the wherefore," or the true science of farming; but from the number of agricultural publications now in circulation, enough may be obtained to better our condition very much, and I feel a hope that proper exertions on the part of those who see and feel the necessity of a change, will bring about a favorable one, even among those who are fixed in the habits of their forefathers. As some evidence of my industry in the cause, enclosed are ten dollars for ten copies of the present volume of the Cultivator, for my neighbors who have consented to take them. And I would say to every subscriber, try and do likewise. Very respectfully, &c.

C. HARBIN.

Inquiry as to the Operation of Gypsum.

Canton, Pa. Dec. 1838.

Permit me to inquire through the columns of your very valuable paper, for a little information on a subject that would seem to merit more attention than it has as yet perhaps received from philosophic investigation; I mean the manner in which gypsum (common plaster) operates on plants to increase their growth. Does the sulphate of lime absorb another portion of oxygen from the atmosphere when on the blade of the plant, and thus leave the nitrogen at liberty to be absorbed by the plant to increase its growth, or is it some other way, or how is it? C. C.

Remark—The first point to be solved is, does the gypsum actually benefit the plant, *while upon its leaves?*—This is a controverted point—and we are rather inclined to sustain the negative. Our opinion is, that gypsum, that is, sulphuric acid in its combined state with the calcareous base, is a necessary element in all plants which it benefits, and that it is imbibed only by the roots of the plants from the soil, and consequently that it only benefits when it enters the soil. We know of no case where a greater portion of oxygen can be combined with sulphur than exists in sulphuric acid.—*Conductor.*

Singular Facts.

Black Locust Grove, near Liberty, Mo. Nov. 6, 1838.

Hon. J. Buel—Sir—In the last number of the Cultivator, I saw the rust on wheat attempted to be accounted for. Now, sir, I will give you my own observations and experience on that subject, for your reflection.

In the year 1835, the army worm, (a brown worm with white stripes,) made its appearance in Mason county, Ky. and was very destructive on some meadows and pastures, and some of us thought they would ruin our wheat, but not so. The season was wet and cool about the time of and during their appearance. The wheat had began to turn a little just below the head; a Major Waddle had two fields of wheat, one of them the worms stripped of all its fodder or blades, and got a few paces into the other, when they disappeared; the field they stripped made an excellent crop, while that portion of the other which they did not touch, was nearly ruined by rust. The fields were both clover sod, consequently the wheat rank and thick bladed. It was remarked that year, that every field in which the worms made their appearance turned off good crops, while most of those that escaped the worm were lost by rust, especially the fields that had been in grass.

Now, sir, you can make what use of this you deem best. I will now give you a description of some singular stocks of corn which made their appearance in mine and one of my neighbor's fields; the variety planted was the large yellow gourd seed. After the crop had generally silked, and the most of it in good roasting ears, you could see several stocks not tasselled, and still growing in all the thriftiness and verdure of June, though unusually dry. One of them (which I now have) is indeed a curiosity, measuring 17½ feet long with five joints undeveloped, (for there were five blades clustered up around the tassel, which had just began to make its appearance,) now allow only six inches to the joint, and it would have measured when grown, 20 feet, and 33 joints, 13 of which had roots from one to three inches long sticking out all around them; the blades were from four to six inches wide; none of the stocks ever had any corn on them. Most respectfully, AUGUSTUS H. F. PAYNE.

EXTRACTS.

Of Grass Lands that ought not to be broken up by the Plough.

There are various sorts of grass lands that ought not to be broken up; as water meadows; salt-marshes; lands apt to be overflowed; lands near large populous towns, where the produce of grass land is always in demand, and consequently dear; and low lying tracts, in the vallies of mountainous countries. But whether rich lands, which have long remained in grass, and continue productive, should ever be converted into tillage, is a question respecting which a great diversity of opinion has been entertained.

The lands considered as best adapted for permanent pasture, are of three kinds; strong tenacious clays, unfit for turnips or barley, which are said to improve more the longer they are kept under a judicious system in grass; soft clayey loams, with a clayey or marly bottom or substratum; and, rich sound deep-soiled land, or vale land, enriched at the expense of the higher grounds, generally lying in a situation favorable with respect to climate.

The advantages of such pasture are represented in the strongest light. It is affirmed that they feed cattle to a greater weight; that they are not so easily scorched by the summer's drought; that the grasses are more nutritive for both sheep and cattle; that milch cows fed upon them give better milk, and more butter and cheese; that the hoofs of all animals pastured on them are much better preserved; that they produce a greater variety of grasses; that when properly laid down they yield a succession of pasture throughout the whole season; that the herbage is sweeter, and more easily digested, and that they return an immense produce at a trifling expense.

To break up lands possessing these advantages, it is said, can only be justified by the most urgent public necessity, and to prevent the horrors of famine. The real value of such lands will appear by considering their rent and produce. The grass lands of Lincolnshire are accounted the best in the kingdom. The rents are various, from £1 15s. to £3 per acre, [equal to $7.77 to $13.32] and the value of the produce per acre from £10 to £15. This produce arises from beef, mutton and wool, and is obtained, with little variation from the nature of the seasons, and at a trifling expense. The stock maintained per acre on the best grazing lands, surpasses what could be fed by any arable produce. It is not at all uncommon to feed at the rate of from six to seven sheep in summer, and about two sheep in winter. The sheep, when put upon the grass, may weigh from 18 to 20 lbs. per quarter, and the increase would be at the rate of 4 lbs. per quarter per sheep. But suppose it only 100 lbs. at 8d. per pound, that would amount to £3 17s. 10d. The wool would be worth about two guineas more, besides the value of the winter keep, and the total may be stated at about £7 per acre, got at little expense. Such lands, it is evident, can not be better employed than in feeding stock.

Grass on tenacious clays and heavy loams, when brought in a succession of years, or perhaps of ages, into a state of great productiveness, can not be ploughed without the risk of great injury, and are more profitable in the production of herbage than they could be in the production of grain.

Grass on deep-soiled sound vale lands, would be productive of corn if ploughed; but would be probably injured by cultivation; from their texture being altered and rendered unduly loose and open by tillage; from the native plants being more or less destroyed or enfeebled; and from the great decomposition and waste of the principles of fertility resident in the soil.

The extent of these descriptions of land, however, is not so great, that the advantages of breaking them up could probably ever be a national object, or worth the risk of injuring their future productiveness in grass. But there are pasture lands of the inferior sort, which are apt to be confounded with those already described, and respecting the propriety of occasionally appropriating them to arable culture, there can hardly be a doubt. Such lands do not depend upon their intrinsic fertility, but upon annual supplies of manure derived from the arable land in their neighborhood.—*Loudon.*

Of the advantages and disadvantages of breaking up grass lands.

The advantages of breaking up grass lands, not of the richest quality, will appear by a comparison of their product with that of arable land. From the inquiry of the Board of Agriculture, it appears that an acre of clover, tares, rape, potatoes, turnips, kale or cabbages, will furnish at least thrice as much food as the same acre would have done had it remained in pasture of a medium quality; and consequently, that the same extent of land would maintain at least as much stock as when in grass, besides producing every other year a valuable crop of corn; and this, independently of the value of the straw, which, whether consumed as litter, or as food for cattle, will add considerably to the stock of manure. It follows, that with the exception of rich pastures, arable land is, on an average, superior to grass land with respect to furnishing articles of human food, in the proportion of three to one; and consequently every piece of land, unnecessarily kept in grass, the produce of which will only maintain one person, is depriving the community of food, capable of maintaining two additional members.

The principal objection to the conversion of old turf into arable land, arises from an alledged infirmity in the new when compared to the old herbage; a complaint which probably originates either from the improper choice of seeds, or from giving them in too small quantities, thus favoring the growth of weeds. A gentleman who had a large farm, principally consisting of strong rich clay, (every field of which, with hardly an exception, he occasionally broke up,) was accustomed to lay them down with a crop of barley, and to sow 14 lbs. of white clover, a peck of ribbon grass and three quarters of hay seeds the acre. By this liberal allowance of seed, he always secured a thick crop of herbage the first year, which differed from old pasture only in being more luxuriant. Such lands, therefore, under judicious management, will rarely be injured by the plough. When laid down from tillage into grass, they may not carry for the first year or two, such heavy cattle as they would afterwards, but they will support more in number, though of a smaller size, and bring a greater weight of butcher's meat to market. It is often desirable to keep one or two moderate sized enclosures, of from ten to twenty acres, according to the size of the farm, in perennial pasture, for the feeding of cattle and sheep, and as a resort for the stock to go to in case of a severe spring, or summer drought; but the retaining of any considerable portion of a farm in old turf, or permanent pasture, unless of the richest qua-

lity, is, in general, injurious to the landlord, the tenant, and the public. The value of any estate, where the system of permanent pasture has been carried to an unreasonable extent, may be easily and greatly augmented by appropriating the manure of the farm to turnips and other green crops, and by the adoption of the convertible system of husbandry.

There are many cases where this doctrine, though in general to be recommended, ought not to be carried to its full extent. In Norfolk, where the land is commonly light, and where sheep are both bred and fed upon the same farm, a proportion of permanent pasture is essential.—*Loudon.*

[*From the (London) Farmers' Magazine.*]

Essay upon the Breeding of Live Stock, and on the Comparative Influence of the Male and Female Parents in Impressing the Offspring.

By John Boswell, Esq. of Balmuto and Kingcausie.

[In the year 1825, the Highland Society proposed as the subject of prize essays, the solution of the question, "Whether the breed of live stock connected with agriculture be susceptible of the greatest improvement, from the qualities conspicuous in the male, or from those conspicuous in the female parent?" Four essays were received, to which premiums were awarded. Those that were written by J. Boswell, Esq. of Balmuto, and by the late Rev. Mr. Berry, were considered the best. As many persons may not have seen these essays, which contain information valuable to all those who study the principles of breeding, we have given the essay by Mr. Boswell, which will be found interesting to every one concerned in the breeding of stock.]

Te quoque, magna Pales, et te memorande canemus
Pastor ab Amphryso.—VIRGIL.

The very great utility of a clear knowledge as to the best method of improving the breed of live stock, connected with agriculture, must be apparent to all; and as one heartily devoted to agriculture in all its branches, I cannot help congratulating the farmer on the information he is likely to receive on so important a subject through the endeavors of the Highland Society. As this subject has long (I may say from my earliest youth) been one in which I have taken the greatest delight, and on which I have bestowed much thought, besides having had very great opportunies of seeing experimentally the changes produced on stock from crossing, and other circumstances, I trust I may be justified from any charge of self-assurance, in offering a few facts in as short and succinct a manner as the nature of the subject and my own experience as an author, will permit, being well aware that facility of communicating knowledge is almost as necessary as experience in order to shine as an essayest.

Hoping, then, for candor in weighing the various facts I shall bring forward, and deprecating criticism as to the manner in which they are brought together (being a mere farmer, and no author,) I shall lay before the society such as occur to my recollection.

The society has put the question, "Whether the breed of live stock, connected with agriculture, be susceptible of the greatest improvement from the qualities conspicuous in the male, or those conspicuous in the female parent?"

The first thing to be done is to answer the query put by the society, and, having done so, to prove by facts that the answer given is the proper one. I have not the slightest doubt in my own mind that the answer ought to be "the male."* But before proceeding to prove this, I would warn all who may turn their thoughts to the subject, that it must be an enlarged view of this or any other matter connected with nature, which alone can give a true knowledge as to the point at issue. The fable of the fly on the building ought never to be forgotten; and the stock of a country or a district can only lead to the true result as to any particular breed. I would also remark, that, before the breed of a country can be improved, much more must be looked to than the answer to the question put by the Highland Society, such as crossing, selection of both parents, attention to pedigree, and lastly, food and care of the offspring.

I shall endeavor to explain my ideas on these heads; and then, having given some proofs as to the male being the parent having the greatest influence on the progeny, I shall endeavor to prove, that, whether I be right or wrong, still the male is the parent which we must look to, as best calculated to improve the breed of any country.

The art of improving the breeds of different animals was almost, if not altogether, unkown to the ancients. Virgil, who seems to have paid some attention to it, has stated things which experience has since taught us are erroneous. In this part of the island it has yet to be introduced, and we are forced to go to England for authorities on the subject. A few of our countrymen have indeed, of late years, come forth, as it were—and in this number we must rank Mr. Stirling of Keir, Mr. Robinson of Ladykirk, and Mr. Rennie junior, of Phantassie, who having seen the value of improved stock, and of attending to pedigree, or breeding from parents, "de bonne race," as the French well express it: but with the exception of these, and some few others, we are yet miserably behind. The very term "a great breeder," signifies two totally different things in England and Scotland: in the former, it means a judge, and one who delights in improved breeds; in the latter, a person who has a great number of (commonly speaking) half-starved calves or miserable lambs, and in whose stock we may see every variety of shape and colour. We have only to look to any drove of Scotch beasts on the road, to satisfy ourselves of the want of all care in our breeders. The cattle are of all different shapes, some with horns, and some without; and if you inquire of the owner, you will find that he purchased some of those dissimilar beasts, not from different breeders, not in different districts, but from the *same farmer*—and his own cattle in one fair. How and why is this? Because our Scotch farmer is ignorant of his own trade! They all know and admit, that "breeding-in-and-in," or "oure sib,"* as they call it, is bad; they know the value of crossing, and they wish to cross, and do so; but it is without judgment. A farmer no sooner hears that his neighbor has got a good bull, most likely from a distance, than he says, "I must have a breed of him," as he calls the first offspring between his own cow and this bull; and the cow is put to this animal, although the one should be Galloway, and the other a short horn: thus his calves are so unlike, that, when his stock is carried to market, they present that tag-rag appearance which I have mentioned before, and which the best dealers are now rectifying to themselves for their own profit, by carefully classing them into horned or polled, &c. and thereby raising the value of the *self-same animal* from 10s. to 20s. a-head in the markets of the south, by giving them that uniformity which the breeder ought to have done.

When I would praise the advantage of crossing, I would have it then to be clearly understood, that it is only to bring together animals, *not nearly related*, but always of the same breed, never attempting to breed from a race-horse and a cart-mare, or *vice versa*. Such a thing may do well enough for once to get an insulated animal, but will end in vexation, if attempted to be prolonged into a line.

We know that crossing, even however ill-done, is productive of good. It uniformly frees an animal from many of the weaknesses and maladies to which those bred *in and in* are subject, and almost invariably procures a much larger animal than either of the parents. That enlightened gentleman and accurate observer of everything connected with animals, Sir John Sebright, whom I shall frequently have occasion to quote, says, "I have tried many experiments by breeding in and in, upon dogs, fowls, and pigeons; the dogs become, from strong spaniels, weak and diminutive lap dogs; the fowls become long in the legs, small in the body, and bad breeders."

Mr. Bakewell, that illustrious breeder, denied this; and was the first, I believe, who said that a cross was unnecessary, that animals would not degenerate by being bred in-and-in, &c. but let us look to the result. His admirable breed of sheep are fast going to decay; they have even now become small, and are, to a great degree, what is termed soft sheep, *i. e.* liable to many complaints. The malady to which sheep are most subject, decay of the liver, attacks them very frequently, and altogether, they make good the old adage, of soon ripe soon rotten; more quickly coming to maturity than any animal we know, and as speedily going to decay. I have seen the wonderful effects produced by crossing, in renovating this breed, having, for several years, been in the habit of buying in a couple of scores of Highland ewes, and putting them to a pure Bakewell ram. They were always poor small things, worth not more than from 3s. or 3s. 6d. to 6s. each; yet these ewes produced lambs which astonished every one who saw them, and which sold to the butcher at 10s. 6d. a head. As to the appearance of those lambs I shall have occasion to speak in another place. Did the limits of an essay permit I could bring many more instances to prove this my first position, that it is absolutely necessary to shun breeding in-and-in; but, as I must hasten to the main question, I shall only remark, that the benefit of crossing extends even to the vegetable creation, a fact which is now pretty well known, and may easily be proved in the cultivation of various plants. In none is it more conspicuous than in the turnip. It is now some years since it occurred to Mr. Gordon, farmer, at Orrock, near Aberdeen, that, as the brassica tribe easily breed together, as it were, it might be possible to cross the ruta baga with some of the other sorts. He did so, and found that the crosses which he had got were far superior in size to either of the sorts he put together, and also very hardy as to standing frost. I know another small farmer, who, after a very severe winter, tried putting red-top and Norfolk white turnips together, which are both very easily destroyed by frost. From these he procured a cross which stood the frost uncommonly well, and grew to a large size on poor soil. But to proceed to selection.

In this term I would include, not only the choice of two well-made parents, but the guarding carefully that the same defects, however slight, did not occur in both; for it is a fact, stated by Sir John Sebright, and which has uniformly been proved by my own experience, that it is not always by putting the best male to the best female that the best produce will be obtained; for should they both have a *tendency* to the same defect, although, in ever so slight a degree, it will, in general, preponderate so much in the produce as to render it of little value.

I found the truth of this in a very striking instance about ten years ago. Having a cart mare of a very superior description (and which has twice gained premiums at agricultural shows) I looked out for a first-rate stallion, intending to breed from her. At that time a horse, belonging to Mr. Buchan, near Crief, called Blaize, was carrying all before him.* I thought I could not do better than breed from this horse, not taking into consideration that both sire and dam were of the same make, viz. rather long in the leg; the consequence was, that I had a very fine foal to be sure, but with longer legs than either of the parents. The next time I had learned to correct my former error, and bred from a short-legged horse from Cheshire, which was a great cross to my Scotch mare, and also differed from her in shape. The effect was immediately visible. I had a mare which it would be difficult to produce an equal to, the leg not being so short as the father's, although the whole appearance much resembled him, nor quite so long as that of the dam. Another very striking instance of this came under my notice a few years ago. A friend of mine (General Burnett) had a mare what is called three parts bred, certainly a very fine mare to breed from, but a very tall mare, with long legs, which was put to the longest legged thorough-bred horse I ever saw (Bethlem Gober, the property of lord Aboyne.) The produce quite resembled the sire, and, at two years old, had reached the height of seventeen hands; but he was a monster, all legs, and very soon proved this by knuckling over at the pastern joint, till at last he could not walk; and at three years old was shot. The same mare was next covered by Hospitality, a horse as remarkable for being short in the leg, and what is termed short-jointed. The produce was now a low sturdy animal, greatly resembling the sire, and short in the leg;† thus in both instances proving, not only what I mention to be requisite, viz. judicious selection of the two parents in reference to the make of each, but also the great power of the male to change the whole shape and appearance of the produce.

I proceed next to mention the necessity of attending to *pedigree*.

If we look, with an attentive eye, to Nature and to her productions, we shall see that they are not only beautiful, but that all she does is uniform. Thus, every wild animal is of the same colour, and nearly of the same shape; every flower resembles another; but man must always be assisting nature, as he terms it. Then we see flowers grow many coloured, or perhaps double; beasts and birds change their shape, colour and nature, so that we see such varieties as were altogether unlooked for.

The only way we can guard against this, is to know well what the *ancestors* of the animals we breed from were. Without this, our produce will every now and then be breaking through the general rules, and annoying us with odd-looking animals, deriving their shape from some of their ancestors, perhaps, two or three generations back.

Few words will suffice as to food, and care of the offspring. Nothing can be more absurd than to suppose that animals can improve if neglected in their youth.

We have the strongest proof of this in the starved animals brought from the West Highlands, which crowd our fairs, particularly those of Falkirk and Hallow Fair of Edinburgh. Let a farmer buy some of those when "year olds," and place them (ere they be at the age of maturity) in a more genial climate, and on good keep. See what beautiful cattle they become. Let him buy two-year olds, and the improvement will be less—at three, and they will only lay on fat, without reaching large size. On the other hand, let him purchase half a dozen starved looking small cows, from the same part of the country, in calf (provided they shall be of the pure breed;) let him take those cows home, and suffer the produce to suckle the dam while she feeds in good pasture. In winter, let them be well fed, and lie in a shed or house tolerably warm. What sort of beast has he now? Let the reader call to mind the West Highlanders shown at Queensbury House for the two last years, every one of which weighed from 70 to 80 stone, and the question is answered. I was once taken to see the cattle of the late General Simpson, who had the purest short-horn blood, a breed which, without all doubt, are capable of being made the fattest. These cattle were in such a state as I have never seen any other animals. They were all bone and skin, their eyes looked unhealthy; and altogether, from starvation, and I rather think from

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* It often happens that an author who has distinctly espoused one side in a question so difficult as this, feels disposed, after the lapse of two or three years, to modify, or even alter, his opinions; but it is consistent with our knowledge, that the accurate observations and farther experience of two years have only strengthened the author of this essay in the assertions which it contains.—*Editor Farmers' Magazine.*

* Nearly related.

* This horse generally cleared £150 per annum to his owner, gaining every prize at all the agricultural shows for many years; frequently being selected as the best, when 25 to 30 of the finest stallions from Clydesdale and Fife were shewn in the same field; and was, without all doubt, a most superb horse.

† In the Philosophical Transactions for 1809, in a paper by Mr. Knight, on the same subject as this essay, the author, in contending for the impropriety of propagating from large in preference to small females, brings forward a very interesting remark upon length of leg in the offspring. "Nature," says he, "has given to the offspring of many animals (those of the sheep, the cow, and the mare, afford familiar examples) the power, at an early age to accompany their parents in night; and legs of such animals are nearly of the same length at the birth as when they have attained their perfect growth." The natural result from which would be, that the offspring should resemble their mother in length of leg, and consequently, while there was an excess in this respect on her part, care ought to be taken to breed from a male, calculated by the comparative shortness of his legs, or the great depth of his chest and shoulders, either to correct the tendency or impart a body of proportional power.—*Ed. Mag.*

want of crossing, they appeared like so many invalids in the last stage of consumption. To improve any breed, or keep it up when improved, stock must be well fed from the time they are produced. "Sir," said a great breeder to me once, "to produce a fine animal, you must feed him from the starting-post." Warmth, that is a temperate climate, appears to be perfectly necessary to the improvement of all animals, and particularly so *in live stock connected with agriculture*; for, if we look at these animals, or even the human species, whether in the frigid or in the torrid zone, we find them dwindling into Liliputian size.

I come now to the grand point; to prove which, I conceive it will be necessary to fix upon some marks whereby a change, and that change an improvement, may be traced. The one, which in my mind is by far the strongest, is colour; next, I would place smallness of the head and ears; in the horse, ox, and sheep, prominence of the eye; in all wideness of the chest, tendency to fatten, early maturity, tranquillity, and love to man, or rather dependance on man.

Let us now proceed regularly, and commence with the horse, as the most noble as well as the most useful animal. The influence that the male has on this class of animals is the most striking. Every one must recollect how, in blood-horses, the colour of the sire goes throughout the progeny, and, in a dealer's stable, every grey is a Delphini or a Sir Harry Dinsdale, every black a Sorcerer or a Thunderbolt, and so on. While you hear people constantly remark that such a horse can be nothing but a get of such a one—what is this but to say, the colour and appearance of the male goes throughout the produce? In work-horses it is the same. A very strong instance of this was visible some years ago in the county of Kincardine. Here there was not, I suppose, one single mare to be found of a chesnut colour, when Mr. Barclay, of Ury, brought down a Suffolk punch, of a bright red chesnut colour, and in a few years plenty of chesnuts were to be found. A few years afterwards, a dun or slate-coloured stallion gained the prize from the Kincardine Agricultural Association; when he came into the country, dun horses were very rare, now they are to be found everywhere. In the county of Fife, some years ago, a horse called Sportsman, found his way from Yorkshire, and covered a vast number of mares, particularly those belonging to the farmers, which at that time were either black or grey. This horse was a rich dark brown, with a tanned muzzle, and he instantly made a very large proportion of horses of that favorite colour; and what is still more remarkable, he was himself one of the best trotters ever seen, and his progeny were so also, so that the farmers talking of a good trotter, would say, "O yes, he is a Sportsman." Sir Robert Dick, a few years ago, purchased a work-mare, which I happened to know the breed of for several generations. She was black, very large, and coarse; eyes small, head and ears large, and very rough at the heels. This mare was put to Caleb Quotem, a beautiful bay horse, with much of what dealers call gaiety. I saw the produce; it was bright bay, with no hair at the heels, the eyes large, the head and ears small, and altogether the produce had put on the appearance of a blood-horse. Here the dam was of the cart breed. Let us look the other way: Mr. George Harley Drummond had two or three thorough-bred mares, which had thrown foals, small in size and deficient in bone to a blood-horse. He put them to a cart-horse, they instantly produced stout boned colts, with much hair at heel, and altogether like the sire. In the year 1821, I purchased a very neat small mare for a relation of mine, which had a foal at her foot by a cart-horse; this foal turned out to all intents a very good cart-horse. The mare was afterwards put for three seasons to Kutuzof, and the foals were in all appearance like blood-horses.

The late General Ayton, of Inchdairnie, a great many years ago, sent down a horse from England to his property in Fife, which covered the country mares in his vicinity (at that time, I am informed, very poor beasts,) and produced such wonderful effects on the breed in that neighborhood, as may be seen this very day; the horses in that quarter being the best in the country, and particularly remarkable for width of chest, docility in work, and altogether fine animals. Last year (1824) I chanced to see the tenantry of a gentleman, who has the district which lies along the banks of the river Avon, in Aberdeenshire, driving his winter store of coals. The horses struck me as being far above the common run of those in the Highland glens, and in fact first rate, compared with what ten years before I had seen in the carts of the self-same farmers. I was at first somewhat at a loss to find out how so great a change had taken place, as I knew that the land in that part of the county was all held by small farmers, who neither could nor would purchase large high priced mares to breed from, far less those horses then in my view. I soon found, on investigating the matter, that the whole change had been brought about by good stallions; and in this way: The different agricultural associations in the north have, for many years, been in the practice of offering large premiums for stallions, which brought troops of fine horses from the west of Scotland. After the best had been picked out for the prize, the rest were set adrift; and these horses, dispersed over the country, of late years, from the badness of the times and an overstock of them, covered at any price the farmer pleased to offer. Thus good horses wandered into their glen, to their very doors, and at such a price as these men could give; the result was what I have stated.

In the horse, then, it seems clear that it is to the *male* we must look for improvement. Not that I would be supposed to assert that the whole improvement can be brought about *at once* by the male; that, if a man were to put a Shetland pony to Eclipse—such a one, for example, as "The Great Unknown" has been pleased to mount Mr. Yellowlees on—were the little beast, from which the agriculturists' legs dangled, put, I say, to Eclipse, no one would hope to procure a racer; nor can we think that a Lincolnshire black, and a Highland garron, taken out of a peat cart, will produce an animal fit for a London dray; but by repetition the end will be produced. I once put the question of the Highland Society to a very able man who fills a chair in one of our universities, and who is an observer of nature of no ordinary cast, and who also, from his profession, (a medical man,) may be supposed to be a good judge. His answer instantly was, "The male, without all doubt, but (added he) you must have a female capable of developing the good properties of the male, otherwise a good male will be thrown away."

(Remainder in our next.)

On the best means of permanently improving the class of Clay Soils.

[*From the Farmers' Magazine.*]

There is no doubt but thin clay soils could be easily improved, and perhaps in a much greater degree than the sandy soils have been during the last 40 years; and the surface may yet be seen clothed with a rich herbage which shall vie with that of the other soils in producing the best cheese, beef, and mutton.

Clay soils, will produce pasture just in proportion to the quantity of decaying active vegetable matter in their composition. If this be abundant, the crop will be rich and luxuriant; and the decaying fibrous roots will form a dry, porous soil, giving a sufficient depth for the rain to sink through the subsoil, where it will run off by the furrow drains. If there be little vegetable matter in the soil, the moisture will make the earthy matter in it collapse and adhere together; and it will form a cold, wet, sterile clay, producing little else but carnation grass of little value.

Pasture on clay soils should never be converted into arable culture, unless the application of skill and capital will not only repay the additional expense of the culture, but also tend to increase the permanent productiveness of the soil. Without a proper application of skill, capital and industry on such land, the converting it into arable culture will only tend to diminish the produce, if the free produce under the artificial culture fall short of that which nature itself afforded.

Much may be learned from the practice of market gardeners, in the neighborhood of London and elsewhere. They have two methods of trenching their land When the soil and subsoil are good to a great depth, they turn the surface under and fetch up a fresh spit from below to constitute the surface for so many years; but when the subsoil is poor or strong clay, they bastardtrench it, as they call it; that is, they throw the surface spit forward, always keeping it uppermost, and dig the subsoil by turning it over in the trench without moving it from its place.

Their object in thus trenching their clay soils is to get depth for the rain-water to decend, and to give a greater depth of moisture to the roots of plants in dry weather, and for the superabundant moisture in wet weather to decend below the roots of plants, and run off to the drain.

If we perfectly drain thin clay soil by furrow draining, and deepen the subsoil by trenching with the spade or the subsoil plough, making it pervious to the moisture which falls on it, that it may immediately sink to a depth below the reach of the roots of the plants, the cultivated surface will be dry; and if we reduce the tenacity of the soil by applying to it those light or sandy substances, which, when well incorporated with it, will make and keep the soil permanently porous and friable, then the land which before produced only a poor crop of carnation grass, or if arable, of oats, will now produce an abundant crop of wheat, beans, oats, clover, and even turnips; and if properly laid down, and full of manure, will form a rich pasturage for any kind of stock.

When clay soils have dry pervious subsoils, they become darker in colour from the repeated application of manures, and under a proper system of cultivation they lose their adhesiveness, and become a loamy soil, producing the most fruitful crops of wheat, beans, clover, vetches, cabbage, and naturally produce the best and richest herbage for dairy cows. The milk from cows fed on such pasture produces more cheese and butter than the milk of cows fed on a sandy soil, and of a better quality.

Any thing which will produce permanent friability in clay soils, such as sand, lime, burnt clay, loose light vegetable matter, or long unfermented manure, will alter its texture and improve its quality.

When tenacious soils are completely subsoil drained, and a system of deep or subsoil ploughing is adopted, every time when the land is in summer fallow, if the soil be deepened and the subsoil made more porous; and if never ploughed when too wet, and a full portion of vegetable manure be given to the soil, and well mixed with it, a mechanical effect will be produced, which will change the nature and texture of the soil, and give to it that friability which is so essential in all productive soils. The rain that falls on it will now percolate through it to the depth of the new formed subsoil, and thence to the furrow drains.

The soil now receives the circulation of the air, which is carried on by the rains filling up the interstices which the air previously occupied, and the complete drainage draws off all the superabundant water as it falls. By this operation the earth again receives a fresh supply of air from the atmosphere, which promotes a chemical as well as mechanical action in the soil, and hastens the decomposition of the air and water, as well as the vegetable and animal manure it contains, and thus a liberal supply of the nourishment necessary for the growth of plants is obtained.

Soil that is principally composed of calcareous matter, in minute divisions, becomes a most tenacious stubborn soil; and, under certain circumstances, as sterile as the most worthless clay. Calcareous matter, therefore, although reckoned a valuable constituent in a soil, becomes an evil when it composes the greater part of it.

Calcareous clay, when thoroughly dried, falls to pieces like burnt lime, whenever it is again wetted.—Every poor clay soil may be much improved by paring and burning the surface, after it has been completely drained.

This is the first step that ought to be taken towards ameliorating such a soil, and the more clayey the soil is, the deeper ought the soil to be burnt. When the burnt surface is mixed with the soil to the depth of the furrow, it acts as a coarse sand, and makes it more friable and porous, by converting the matter, which was before damp and adhesive, into a dry, friable, warm soil, permanently improved and capable of producing luxuriant crops of every kind.

If we can get depth and friability to the subsoil of strong adhesive clay we thereby prevent stagnant water from injuring the roots, and give to the plants the liberty of sending these roots to a greater depth in search of nourishment.

In all rich soils, there is vegetable matter in every state of decay, and the greater this portion of decaying vegetable matter is in strong clay soils, the greater is its productive powers. Besides this, decomposing vegetable matter will tend to keep strong clay land loose, friable, and porous.

Cash Book.

[*From the Farmers' Cabinet.*]

A little care prevents much cost and trouble.

It is a very easy and simple affair to keep a cash book, and yet how very few farmers do it. Any person who can write can keep a book of this description, and many advantages accrue from it. On one page of your cash book set down every thing sold, and the sum received for it. On the other side put down all your outgoings or expenditures; and when it is begun, if the amount of cash on hand is put at the top of the column of receipts, at any time by adding up the two pages, and taking the difference of them, will show the balance of cash you should have in hand; and if there is any disagreement, there must be some error of entry, or there must be "a hole in the purse." A book of this kind accurately kept, would show at the end of the year, or at any other time, the amount of wheat, corn, potatoes, butter, poultry, eggs, or any other articles sold and the sum received for them. It would do more, it would show all your outlayings for stock, seeds, implements of husbandry, repairs, clothing, tea, coffee, sugar, salt, &c. &c. and also for wages, and would present a very curious and interesting document for family examination at the end of a twelve month; and if there should be found to be "a hole in the purse," it would indicate the spot where repairs were most necessary.

A farmer keeping a book of entries of this description, would always know his latitude and longitude, as a captain of a ship does when on the ocean, and he would be less likely to run on to shoals, or get among the *breakers*. As it is not very usual among farmers to take recepts when money is paid on ordinary occasions, and not in very large sums, and as the memories of many people are very frail, such a book of entries as has been referred to, would be of essential service as a record of payment when no other evidence of it existed, and might prevent litigation and trouble in case of the decease of one or both of the parties. On the death of the head of a family who has kept no regular records of his receipts and payments, much difficulty and sometimes heavy losses have occurred, besides a great deal of trouble and anxiety to those who were obliged to grope in the dark in settling his estate.

It is well known that very many worthy intelligent farmers are careful to preserve an accurate statement of all their worldly concerns, duly arranged in proper form, and such rarely find "a hole in the purse."

But there are many others who would at once plead guilty, or, if they did not, could readily be convicted on responsible testimony, of totally neglecting to keep any intelligible series of entries in a book, of their ingoings and outgoings, and these are the persons who often complain of "a hole in the purse," and yet they are not careful to have it repaired in due season.

ABRAHAM.

System of Culture.

In every system, it is absolutely necessary to attend to the equal distribution of labor throughout the year; so that the work which the system requires to be performed in each month may be easily accomplished by the means the farmer is provided with. The different operations should never be allowed to encroach on each other. If these are properly adjusted, the business of each week will be confined to the time in which it is required to be performed.

The best mode of cultivating arable land is that

which produces the greatest quantity of green food for sheep and other beasts, and which they should eat on the ground.

This prepares the land for a crop of grain or corn for the use of man. The alternate system of grain and green food for stock, is that which never should be deviated from.

It produces not only a much greater return of corn and other food for the use of man, but also a much greater quantity of green food and straw which sheep and other animals consume, and gives at the same time a proportionally greater return of vegetable and animal manure. By this means the farmer has not only the power of reproducing the same quantity of grain, &c. but of increasing the capability of the soil to produce an additional quantity. The production of turnips and green food for sheep, gives perhaps ten times the quantity of manure, that the old system did. Increased productiveness given to the soil is genuine agricultural improvement.

Crops of corn, as food for man, alternating with crops of vegetables, as food for sheep or other stock, is the foundation of all good husbandry.

Such a mode of culture should be adopted as will not only increase the quantity of manure, but hasten its decomposition, and thus increase the productiveness of the soil by raising an increased quantity of food for sheep to be again consumed on the land that produced it; and when the soil is thin, poor, light sand, this may be repeated year after year, on the same land, whether it be arable or pasture. The consumption of the produce by sheep on the land is the best, the cheapest, and the most effectual means of improving pasture, as well as arable land.

Vetches, rye, clover, and buckwheat, are sometimes grown on land and ploughed in as a manure; but if these crops were converted into a manure by passing them through the stomach of sheep, the effects produced would not only be much quicker, but of much greater value.

When the farmer is convinced that his corn crops are productive just in proportion to the quantity of sheep he keeps on his arable land; and when he is experienced in the best mode of cultivating the varieties of grain and vegetables which are best adapted to the soil of his farm, he may then calculate with certainty on the result of his operations.

As the weeds which grow on the land are the natural plants of the soil, they much sooner feel the influence of the weather, the manure, and the culture, than the artificial crops we cultivate, and consequently take the lead of the crop; we ought therefore to eradicate every weed out of the land, and when once we get it clean, to keep it so.

We should never take a crop of corn, if by taking it, we give an opportunity for the weeds to spring up in the soil; for this would be only sowing the seeds of future labor and expense, as well as incur loss to us in preventing their increase. The repetition of corn crops in succession tends to increase the stock of weeds in the soil, without giving to the farmer either the time or the power to diminish them, and their growth necessarily retards or prevents the growth of the crop we cultivate; but the production of green crops, such as turnips, potatoes, vetches, and clover, gives to the farmer time and power to clean out any weeds that may be in the soil; and the growth of these crops prepares the land for the production of a crop of corn.

It should be remembered, however, that whenever the weeds have got ahead of us, we must then have recourse to summer fallow to get rid of them. Whatever gives nourishment and life to weeds would, if no weeds were in the ground, give life and nourishment to cultivated plants; and that land which has a dry porous subsoil is most productive, and much easier cultivated than that which has a retentive subsoil; therefore if the land have not a porous dry subsoil naturally, one should be given to it artificially, and this the farmer should do whatever be the expense,—it will repay him with compound interest.

Different modes of culture must be adopted on different soils; for it is evident that the same cause will have very different effects upon soils of a different nature.

The effect produced by rain on clay soils has been shown to be very different from the effect which it produces on sandy soils; and the effect of drought on a dry sandy soil is equally different from the effect which it has on a wet clay soil.

Frost expands the water in the soil about one-twelfth; hence during a thaw, the water is contracted to its original bulk, leaving the soil in a loose open state, and well prepared to receive the influence of the atmosphere. Sandy soils are easily penetrated by water and air; but clay, unless well pulverized, is impenetrable to either.

The best soil for any kind of plant is that in which it naturally grows with most luxuriance; and a quicker repetition of such plants may be made than of those to which the soil is not naturally so well adapted.

Clay soils having a proper mixture of sand and lime will produce wheat, beans, clover, and cabbages, in the greatest perfection.

Light sandy loam is best fitted for the production of barley, rye, peas, turnips, potatoes, vetches, &c.

Every different soil requires a peculiar management, and a different course of cropping.

Light sand and gravel are early soils, and should be early planted in the spring, that their growth may shut out the influence of the sun from the ground at an early period of the summer.

All succulent plants, and those that are not allowed to ripen their seed; such as clover, rye grass, vetches, turnips, cabbages, carrots, potatoes, &c. are said to receive a great part of their nourishment from the atmosphere; and therefore do less injury to the land than wheat, barley, rye, oats, peas, beans, or any of the succulent plants when they are allowed to bring their seeds to perfection.

Vetches, peas, and beans, seem only to injure the land they grow on when they are permitted to perfect their seed; for if they grow so luxuriantly as to produce nothing but straw, which is sometimes the case, or if, like vetches they be cut green, their growth does not injure the land but is an advantage to it; we may therefore presume that it is only in ripening the seed that the soil is injured by such crops.

When clover, vetches, turnips, cabbages, &c. are produced and consumed on the land without perfecting their seed, the soil is not at all injured by their production, and they may be repeated and consumed every year not only without the least injury being sustained by the soil, but an actual yearly increase is thereby made to its productive powers; if any one of these crops, however, be allowed to perfect its seed for two consecutive years on the same soil, the land would be injured for many years to come. The inference to be drawn from this fact is, that the soil is injured more in producing the seed, than in producing the stem and foliage, or leaves. The foliage may receive more of its nourishment from the air than the seeds; or, the seeds may receive more of their nourishment from the soil than the foliage.

The injury that land sustains from converting grass into hay is, that the production of seed either of grass or of corn is that which injures the land more than the most luxuriant growth of leaves or straw.

Pasture prevents the production of seeds and encourages the growth of the roots, which are thus promoted, and are constantly pushing out in search of nourishment all the year round; so that there is no period when they lie dormant, as in the case when seed is produced.

All perennial plants that produce seed lie dormant for several months after they have produced it; and annual plants, if prevented from yielding their seed, either by mowing or pasturing, become biennial or even triennial.

There is a great loss sustained by land from the keeping of corn in the straw for a year or two; as the farmer is thereby prevented from keeping stock to consume the straw, and of course the land sustains the loss of manure from its non-consumption.

The adoption of the best rotation of crops will not secure, at all times and under all circumstances, the improved result: no! the rotation must be accompanied with the most sedulous attention to the minute details of all the operations, and these must be executed at the proper time to insure the result required.—*Morton on Soils.*

Young Men's Department.

Hints to Young Farmers.—No. XII.

SOCIAL AND CIVIL DUTIES.

Every person of common reflection must be aware, that he owes to others, and to society, certain social and civil duties, in requital for the kind offices and protection which he receives and enjoys from the community of which he is a member; and he *should* know, for such we consider to be the indisputable fact, that upon the manner in which these duties are performed, will materially depend his reputation with good men, and the measure of his pure enjoyments in life. Hence it is of the first importance, that he should fix upon a scale of morals in early life, which shall govern in his business transactions, and in his intercourse with society.

Every class in society seems to have a scale of morals peculiar to itself, in its business affairs, none of which are exactly fitted for general adoption. The importing merchant, for instance, thinks it justifiable to use deceptive invoices, by which he defrauds the revenue of a part of the duties due upon merchandize; while the salesman is valued and rewarded according to his tact in extolling his wares to the buyer—in giving them a fictitious value. Those who subsist on the spoils of office, consider that—"all is fair in politics"—that "the end justifies the means." The lawyer encourages litigation, because it is his vocation—his dependence for the wants and the superfluities of life. The physician knows when he gets hold of a rich patient, and deems it no breach of morals to make him pay well—to pay something for his poor neighbor. The parson, even, feels no compunction in abandoning his flock to the wolves, and *accepting a higher salary*, when he is persuaded he can be more eminently useful to the cause of vital piety. And the farmer practices a thousand little devices, to multiply his pence, which he would hardly applaud in his neighbor. We do not mean to charge these practices upon the whole of the different professions—for there are many honorable exceptions in all—we would merely intimate that they are besetting sins, human propensities which it requires fixed principles and inflexible fortitude to resist and overcome. If once successfully indulged in, they are apt to obtain an ascendancy, and to become more and more difficult of restraint.

But there is a precept, of the highest authority, applicable to all classes and conditions of life—which all commend, though few practise it. It is to "DO UNTO OTHERS WHAT YOU WOULD THAT THEY SHOULD DO UNTO YOU." This constitutes the highest rule of moral conduct, and its observance confers the highest honor—the purest happiness. Adopt it as the rule of life. It will insure you the respect and love of all who cherish virtue—it will do more—it will insure self-approbation, and self-respect.

Order and Neatness;

OR THE FORCE OF INDIVIDUAL EXAMPLE.

[*From Fireside Education*]

These two virtues generally go together, and you seldom see one without the other. In illustration of their benefits on the one hand, and the evils which result from their neglect on the other, let me introduce to the notice of the reader the following sketches, which he may have seen before. They are pictures of village life, but lessons may be drawn from them to suit the city, as well as the farm-house and cottage.

The village of Decay is situated somewhere in New-England. The land is good, and the people have all the means of comfort and happiness, but they don't know exactly how to use them. We shall give a sketch of Capt. Seth Wideopen's house, which is a sample of the whole town. Capt. Wideopen, by the way, is a good sort of man enough, and is well off, as the saying goes. He has two hundred acres of land; but he has not the good sense to observe the advice of the old rhymes—

"'Tis folly in the extreme to till
Extensive fields, and till them ill.
The farmer, pleased, may boast aloud
His bushels sown, his acres ploughed,
And, pleased, indulge the cheering hope
That time will bring a plenteous crop.
Shrewd common sense sits laughing by,
And sees his hopes abortive die.
For, when maturing seasons smile,
Thin sheaves shall disappoint his toil.
Advised, this empty pride expel;
Till little, and that little well.
Of taxing, fencing, toil, no more
Your ground requires when rich than poor;
And more one fertile acre yields
Than the huge breadth of barren fields."

The captain is also ignorant of the advantages to be found in following the injunctions laid down by the same writer, as follows:—

"Neat be your farms: 'tis long confessed
The neatest farmers are the best.
Each bog and marsh, industrious, drain,
Nor let vile balks deform the plain
No bushes on your headlands grow
Nor briers a sloven's culture show.
Neat be your barns, your houses neat,
Your doors be clean, your court-yards sweet;
No moss the sheltering roof enshroud,
No wooden panes the window cloud,
No filthy kennels foully flow,
Nor weeds with rankling poison grow;
But shades expand, and fruit-trees bloom,
And flowering shrubs exhale perfume.
With pales your garden circle round;
Defend, enrich, and clean the ground;
Prize high this pleasing, useful rood,
And fill with vegetable good."

The fact is that there is more comfort in neatness and order than most people think of. There is also much virtue in these things. They stamp themselves, after long habit, on the mind and heart, and, to some extent, mould the intellectual and moral character. No being but a pig is happy and at ease in the midst of filth and confusion; and if a person, by living among them for a long time, gets reconciled to them, he is so far depraved and degraded toward the standard of one of the lowest of the brute creation.

But to be a little more particular. Capt. Wideopen's house stands on a broad street that runs for a mile in length through the village of Decay. It is an old farm-house, one story high, with its gable end to the street. In front of the house is the wood-pile, spread out so as to cover a rood of ground. As you pass by, the barn, cow-house and yard, with its deep morass of manure in high flavor, salute the eye and nose. The pig pen, wide open and in full view, is between the house and barn. In a warm day the congregation of vapors is overwhelming. The well, the wash-shed, the wood-shed, all are in full view to the passers by. The space around the front doors is defiled by the pigs, who root and grunt there by day, and by the geese, who roost there by night.

Thus all the unsightly and unseemly objects are spread out to view, and the scene is embellished by the addition of broken sleighs, sleds, ploughs, wagons, carts, old posts, &c. There lies a shapeless heap of stones; yonder is a gate hanging by one hinge, which will soon be broken for want of care. Here is a pair of bars thrown down; there the stone wall has tumbled over!

Such is the scene presented by the residence of a wealthy, respectable farmer in New-England; and I am sorry to say that there are hundreds, nay thousands, like it in New-England—ay, in New-England! Not that every village is a Decay, or every farmer a Wideopen. No! Some of our villages are delightful, and some of our country people are patterns of good order and neatness. But I am speaking of those who are not so. And if these pages should come into the hands of any person, in New-England or out of it, who is ignorant of the advantages of neatness and order, let me urge upon him, as worthy of immediate attention, the following remarks, drawn from observation and experience.

1. A man, whose house, like Capt. Wideopen's, is out-of-doors marked by disorder, confusion and want of cleanliness, is generally the same in-doors.

2. Where there is confusion and want of neatness, though there may be plenty of bread, butter, milk, cheese, fuel, clothing and other necessaries, there is little comfort, little thrift, little good nature, little kindness, little religion, little beauty, little peace or happiness.

3. Children brought up in the midst of confusion and want of cleanliness, are likely to be low, vulgar and vicious in their tastes and in their character. Let fathers and mothers consider that, if they bring up their children in this way, they are schooling them to be drunkards, profane, mean, base, wicked and despised; that the schooling of home is the most lasting of all schooling; that the ferule of the school-master cannot efface what the father and mother have taught; that the preacher cannot destroy the die stamped upon the young heart at home by parental example! Look to this, ye fathers and mothers, and if for your own sakes ye are indifferent to neatness and order, for the sake of the young immediately around you, be no longer so!

4. There is a constant tendency in the want of order and neatness to cause ruin and waste; consequently a man who, like Capt. Wideopen, allows things to go on in this way, generally gets poorer and poorer, till at length, mortgages, embarrassment, debt, losses and the law, bring him to poverty.

5. Neatness and good order contribute to health, wealth and happiness; while opposite habits tend to disease, misery, poverty, vice and short life.

Let us now turn to another scene. The village of Thrivewell is also a New-England village, and is remarkable for its pleasant, cheerful aspect. Every person who rides through it is delighted; and the place has such a reputation, that the land is worth more, and the houses will sell for more, than in almost any other place of the kind you can name. And this arises from the good taste, neatness and order, which characterize the inhabitants. I will give you a sketch of the house belonging to Capt. John Pepperidge; a careful, correct, upright man, who has risen from poverty, to ease and competence, by industry, economy and prudence.

His house stands three or four rods back from the street; the front yard is green, grassy and decorated with handsome trees. The wood-pile is fenced in; the barn-yard, pig-pen, &c. are also tidily fenced. It is a favorite proverb with Pepperidge, that there *should be a place for every thing, and that every thing should be in its place.* This is his great maxim; and he not only observes it himself, but he requires every man, woman and child about him to observe it also. He says it saves him one hundred dollars a year.

He has other rules, such as *a stitch in time saves nine:* thus, as soon as a stone falls off the wall, he puts it up; when a rail gets out of the fence, he replaces it; when a gate is broken, it is forthwith repaired; if a clapboard is loose, a nail clenches it. Thus, matters are kept tight and tidy. Of a wet day, instead of going to the tavern, he spends the time in making little repairs. At odd moments of leisure, he sets out trees and shrubs; thus, year by year, beautifying his place, and rendering it not only more comfortable, but also worth more money, in case he should ever desire to sell it.

Capt. Pepperidge takes great pleasure, and perhaps a little innocent pride, in his place, though, to say the truth, it is by no means costly. He loves better to spend his time in making it more convenient and pleasant, in setting out trees, improving the grounds, mending the fences, &c. than in going about to talk politics, or gossip upon other people's business, or in haunting a tavern bar-room. In short, his home is comfortable, pleasant, delightful. It is neat and orderly, inside and out. And he has made it so; though his wife, having happily caught the influence of his example, contributes her share to the good work. His children are well dressed, well educated, well behaved. Can such a man be a drunkard? Can he be vicious? Can he be wicked? Who has so good a chance of health, wealth and happiness? Who so likely to be respected by his neighbors? Who so likely to do good by his influence and example? Come, Capt. Wideopen, I pray you, and learn a lesson of farmer Pepperidge!

Let us look at the practical effect of Pepperidge's example. Formerly the village of Thrivewell was called Uneasy Swamp, and was inhabited by a set of people becoming the name. They were poor, ignorant, idle and *uneasy.* They were jealous of all rich people, and considered the unequal distribution of property a dreadful evil. They were equally jealous of the wise, and considered the unequal distribution of knowledge a nuisance to be abated. They were also jealous of the virtuous, and hated nothing so much as a just and honest man.—In short, they were, half a century ago, where some conceited but ignorant and ill-minded people are now, willing to level every body and thing to their own standard. If a candidate for office was up, who addressed their prejudices, and coaxed them with promises, though meaning to cheat them, he was the man for them. If he was known to be mean, slippery and unprincipled, fellow-feeling seemed to render them kind, and the more ardently they espoused his cause. Such was Uneasy Swamp; a place which may have its image still in some parts of the country.

But Pepperidge came among the people and set them a good example. They persecuted him, reviled him, hated him, ridiculed him, broke down his fences at night, and played him sundry mischievous tricks. But he was patient, and tough in his patience, as the tree that gave him a name; and he overcame them at last. One by one, the villagers began to imitate him. The small brown houses gradually lost their look of squalidness and disorder. The Swamp emerged from its shadow, and became a cultivated valley. The little farmers and the humble mechanics rose from their degraded condition; education spread its light; industry and frugality showered down their blessings; and Uneasy Swamp became the flourishing village of Thrivewell.

And thus, though none of the people are what is called rich, none are poor. The small houses are neat, and the fruit-trees, the blossoming shrubs, the green grass around them declare that the people are happy. They are not mad in the foolish chase for riches, which is destroying more peace in this country than all the bodily diseases our flesh is heir to. They are now, from better knowledge, satisfied that the rich man shall possess his wealth, both because they perceive that, generally speaking, the laboring classes are the happiest, and that the security of property is the only steady impulse to economy, industry, providence, and the other important village virtues. They are more fond of knowledge, for they perceive that it increases their power of being happy. They respect talent and wisdom, for they know that these are gifts sent by heaven for the guidance of man to happiness. In politics, they are staunch republicans, but always give their votes for men of sterling integrity. A man who has the general character of being an artful, intriguing office-seeker, has no chance with them. They are perhaps a little prejudiced against cities and city people. If they ever have any thing to do with a lawyer, they go to one who has been bred in the country, and one who was in early life a farmer.—They think, and, perhaps, justly, that while this rustic breeding gives a man an habitually honest and plain turn of mind, it also renders him more knowing, sagacious and favorable in his feelings, in respect to country people.

I cannot better close this sketch than by introducing some lines which are much esteemed in the village of Thrivewell. Every man, woman and child there knows them by heart.

"Let order o'er your time preside,
And method all your business guide.
Early begin and end your toil,
Nor let great tasks your hands embroil;
One thing at once be still begun,
Contrived, resolved, pursued and done.
Hire not for what yourselves can do,
And send not when yourselves can go;
Nor till to-morrow's light delay
What might as well be done to-day.
By steady efforts all men thrive,
And long by moderate labor live;
While eager toil and anxious care,
Health, strength, and peace, and life impair.

Nor think a life of toil severe;
No life has blessings so sincere.
Its meals so luscious, sleep so sweet,
Such vigorous limbs, such health complete,
No mind so active, brisk and gay,
As his who toils the livelong day.
A life of sloth drags hardly on;
Suns set too late and rise too soon.
Youth, manhood, age, all linger slow
To him who nothing has to do.
The drone, a nuisance to the hive,
Stays, but can scarce be said to live;
And well the bees, those judges wise,
Plague, chase and sting him till he dies."

CASIMIR PERIER, on being called an "aristocrat," and one of the privileged classes, replied—"My only aristocracy is the superiority which industry, frugality, perseverance and intelligence will always assure to every man in a free state of society. I belong only to those privileged classes to which you may all belong in your turn. They are not privileges created *for* us, but created *by* us. Our wealth is our own; we have made it. Our ease is our own; we have gained it by the sweat of our brows, or by the labor of our minds. Our position in society is not conferred upon us, but purchased by ourselves—with our own intellect, application, zeal, patience and industry. If you remain inferior to us, it is because you have not the intellect or industry, the zeal or the sobriety, the patience or the application, necessary to your advancement. This is not our fault, but your own.—You wish to become rich, as some do to become wise; but there is no royal road to wealth any more than there is to knowledge. You sigh for the ease and repose of wealth, but you are not willing to do that which is necessary to procure them. The husbandman who will not till his ground shall reap nothing but thistles and briars. You think the commodities in human society are useless and misdirected if you do not become wealthy and powerful by the changes; but what right have you to expect—you idlers and drones in the hive—you shall always be fed on the honey and sweets of life? What right have you, who do nothing for yourselves, your families, your communes, your arrondissments, your country or your kind, to imagine that you will be selected by them for their favor, their confidence, their rewards?

"I am not an aristocrat in that sense of the term in which it may be applied in absolute governments, or under imperial rule; but if, by an aristocrat, you mean a man who has earned his promotion by his industry—Oh, then, indeed, I am an aristocrat; and, please God, I may always remain so. The distinctions in human society displease you, because you have not the talent or industry to amend your own position. You are too idle to labor, and too proud to beg; but I will endeavor to take care that you do not rob me. I throw back, then, with indignation and resentment, the charge which is made. I belong to the middling classes of society. I have been selected by my fellow citizens, and by my king, as one of their representatives; and, by the blessing of God, I WILL REPRESENT THEM."—*Blackwood.*

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*Moneys received during the last month, in sums of five dollars and over. The total receipts are included from post-offices marked with an asterisk.**

	No. Vols.		No. Vols.
*Athens,	Ga. 20	Medway,	Mass. 8
*Augusta,	Ga. 74	Mentor,	O. 5
*Baltimore,	Md. 102	*Nashville,	Tenn. 145
Buckram, Qu.	6	*New-York city,	193
*Boston,	Mass. 136	North Lake,	Mich. 5
Burlington,	Vt. 5	Newport,	N. H. 5
Berlin.	Ct. 6	No. Windham,	Ct. 5
*Cincinnati,	O. 19	*Northampton,	Mass. 53
*Chillicothe,	O. 19	Prospect,	Va. 5
*Chuckatuck,	Va. 11	*Pittsburgh,	Pa. 27
*Charlottesville,	Va. 44	*Prince Edward C. H.	Va. 10
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*Cambridge,	Md. 32	Pittsylvania C. H.	Va. 17
Camptown,	N. J. 5	*Port Deposite,	Md. 28
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Derby,	Vt. 5	Richfield, Ots.	5
Duanesburgh, Schen.	6	Richfield, Osw.	5
Farmville,	Va. 13	Roscoe,	Ill. 5
Glasgow,	Ky. 16	Rockford,	Ill. 6
*Hickory Ground,	Va. 21	*Richmond,	Va. 144
Jackson C. H.	O. 5	Ridge Prairie,	Ill. 6
Kanawha Saline,	Va 26	Randolph,	O. 5
*Kanawha C. H.	Va. 57	Stamford,	Ct. 12
*Lockport, Niag.	28	Southport,	W. T. 5
Lafayette,	Ia. 5	Saline,	Mich. 5
Le Roy, Gen.	5	St. Johnsville, Mont.	5
Lowville, Lewis,	5	*Syracuse, Onon.	15
Lawrenceburgh,	Tenn. 11	Spout Spring,	Va. 5
*Lake C. H.	Ia. 17	Warminster,	Va. 5
Mechanicsville, Sar.	11	*Watertown, Jeff.	11
Middlebury,	Vt. 6	Yough Glades,	Md. 5
Maysville,	Ky. 5	York,	Ill. 5
Mocksville,	N. C. 10		

PRICE CURRENT.

ARTICLES.		New-York. Dec. 19.	Boston. Dec. 19.	Philadelphia Dec. 19.	Baltimore. Dec. 16.
Beans, white,	per bush.	1 25 .. 1 30	1 75 .. 2 00	1 50 .. 1 75	1 00 .. 1 25
Beef,	cwt.	7 50 .. 8 00	6 50 .. 7 25	9 00 .. 9 50	9 00 .. 10 00
Bacon, western,	lb.	12 .. 9	10 .. 12	12 .. 9	10 .. 12
Butter, fresh,	lb.	22 .. 26	13 .. 14	15 .. 17	15 .. 18
Cheese,	lb.	12 .. 16	12 .. 14	12 .. 14	12 .. 14
Cotton, best,	lb.	18 .. 17	17 .. 21	17 .. 21	25 .. 27
Flour, best,	bbl.	6 .. 6	8 .. 10	8 .. 9	8 .. 9
Flour, best,	bbl.	10 .. 9	9 .. 13	9 .. 9	9 .. 12
GRAIN—Wheat,	bush.	8 62 .. 9 25	8 50 .. 9 25	7 50 .. 8 50	8 00 .. 8 50
Rye,	bush.	1 78 .. 1 82	1 10 .. 1 12	1 00 .. 1 10	1 00 .. 1 10
Oats,	bush.	50 .. 53	53 .. 58	41 .. 43	37 .. 42
Corn,	bush.	91 .. 95	95 .. 96	84 .. 92	75 .. 81
Hams, pork,	lb.	12 .. 14	16 .. 17	13 .. 15	12 .. 14
Pork, in bag,	cwt.	10 00 .. 11 00	7 50 .. 8 00	7 95 .. 8 00	7 75 .. 8 00
SEEDS—Red Clover,	bush.	9 50 .. 10 00	8 50 .. 9 00	8 50 .. 8 75	8 00 .. 8 50
Timothy,	bush.	2 50 .. 2 75	2 25 .. 2 50	2 25 .. 2 50	2 00 .. 2 25
Sorrel,	bush.	2 37 .. 2 62	2 63 .. 2 75	2 57 .. 2 62	2 50 .. 2 75
Wool—Saxony, fleece,	lb.	45 .. 50	50 .. 55	50 .. 55	50 .. 55
Merino,	lb.	36 .. 40	40 .. 50	38 .. 40	35 .. 40
1-4 and com.	lb.	30 .. 35	35 .. 40	33 .. 35	30 .. 33
Sheep,	head	2 25 .. 3 50	2 50 .. 3 50	2 00 .. 2 50	2 00 .. 2 50
Cows and Calves,	head	39 00 .. 45 00	37 00 .. 40 00	30 00 .. 40 00	30 00 .. 36 00

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